

# Hovering Ferry Interests Houlihan

Mayor John C. Houlihan says of air jets and moves equally well on land or water, able to take in stride four-foot waves or three-foot solid obstacles, its builders say.

Aerosystems representatives say the hovercraft can complete a round trip over a 10-mile route in 35 to 45 minutes.

"I'm not interested unless the service is 100 per cent to help the Oakland Airport," the mayor declared.

The proposal suggests two hover vehicles be placed in use — at a cost of \$300,000 each — along with a maintenance base, terminal facilities, and the necessary drivers, management and staff.

A Buffalo, N.Y., firm, Bell Aerosystems, has broached a one-year trial service program here if Oakland will put up \$500,000 — one third of the proposed total cost.

Houlihan said the proposed \$500,000 amount from Oakland could be considerably lessened by the city's furnishing land, terminal facilities, engineering help, along with possible technical help from the Alameda Contra Costa Transit district.

A Federal Housing and Home Finance Agency grant to explore the airjet supported craft for rapid transit potential, would furnish the other \$1 million.

The proposed two 20-passenger craft could skim between the city of San Francisco and the Metropolitan Oakland International Airport, with stops at Downtown Oakland, Berkeley and Richmond, Houlihan suggested.

The Oakland Board of Port Commissioners has appointed a committee to study the proposal. Aerosystems proposes that a one-year demonstration service get under way about six months after a formal start on the project.

"The real justification for the plan is to take the advertising load off the airport," the mayor added. "They're spending \$100,000 a year to get the people out there."

The boat-like craft, skimming along Bay and Estuary routes, at cruising speeds of 50 or 60 miles an hour and top speeds of about 75 miles per hour, would be a dramatic way to get people to Oakland's airport, Houlihan explained.

The craft, designed in England, is supported by a cushion

## Port to File For \$1 Million

### In Federal Aid

APR 23 1964

Commissioners of the Port of Oakland have given their executive director authority to file a "preliminary application" for \$1 million in federal funds for a "hovercraft" ferry operation across the Bay.

Ben E. Nutter was given the authority yesterday after he outlined his impressions of the new flying machine gained during a recent visit to New York.

Officials of the Bell Aircraft Corp. recently urged city and port authorities here to consider using the newly developed hovercraft for quick ferry service to Metropolitan Oakland International Airport and other points in the Bay.

Nutter said he went to Niagara Falls, N.Y., to visit Bell's hovercraft operations — but the prototype was grounded with a bent propeller.

#### LARGER CRAFT

But later, at Farmingdale, on Long Island, Nutter witnessed a demonstration of a hovercraft at Republic Aviation Corp. It is a larger craft, with two propellers, or "fans" as they are called. Westland Aircraft of England designed the Bell machine, while Vickers Aircraft Ltd., also of England, designed the Republic built one.

Nutter, accompanied by Commissioner Peter M. Tripp, flew over Long Island Sound at more than 50 miles an hour in the hovercraft. It operates by creating a "cushion of air" beneath its belly, skimming just above the surface of the water.

Bell's craft should sell at about \$300,000, Nutter said, while Republic's larger one will probably cost about \$700,000.

#### EASTBAY CHOSEN

The Federal Housing and Home Finance Administration has been authorized to put up two-thirds of the cost of a hovercraft project, and the Eastbay has been chosen for the first such venture.

Nutter said he is not yet sure where the remaining one-third of the cost — some \$500,000 — will come from, whether from Bell, or Republic, or the City of Oakland, or San Francisco-Oakland Helicopter Lines, or perhaps a coalition of all of them.

# 'Hovercraft' (What Is It?) Service Sought by Port

The Port of Oakland aimed at two key points today in its drive to bring skimming "hovercraft" service to the Bay Area:

1—Lineup a half-million dollars to match a hoped-for \$1 million, 2-for-1 experimental federal grant.

2— Figure out just what a "hovercraft" is.

The problem is that the rotor-bladed over-water craft could be considered a plane—but it also could be classified as a boat.

Someone even suggested it might be an evolved frisbee.

Nevertheless, the port made preliminary application last week for the \$1 million federal grant, which would provide initial "hovercraft" service between Metropolitan Oakland International Airport and other points throughout the Bay.

Local sources must provide an additional \$500,000.

Ben E. Nutter, port executive director, told the board of port commissioners yesterday there is a "very critical question" in Washington, D.C., as to "whether the hovercraft is a flying machine or a boat."

Existing plans call for the hov-

ercraft to be operated here by San Francisco - Oakland Helicopter Airlines, a firm certificated by the Civil Aeronautics Board. If the machines are boats, then someone else — the Coast Guard perhaps — would regulate them.

Government officials are confused because hovercraft fly in the air, but operate over land and over water. (They literally fly on a "cushion" or air created by their jet-propelled rotor blades.)

Nutter asked for, and got, authority to send his assistant, Lloyd MacDonald, to Washington next week if necessary.



# Port Expects OK for Hovercraft Here

FIRE AUG 6 - 1964

A U.S. Department of Defense waiver is expected to clear the way for approval of Hovercraft operations serving the Port of Oakland, the Oakland International Airport, and other points in the Bay Area.

The proposal to operate Hovercraft here will apparently clear the hurdles of "Buy America" and "foreign bottoms" as neatly as the craft themselves clear obstacles in the terrain.

That was the opinion expressed by Ben E. Nutter, executive director of the Port of Oakland, in a meeting of Port commissioners yesterday.

Nutter, who visited Washington D.C. to check the progress of Hovercraft experimental opera-

tions here for one year, said yesterday, "I think we're on the way."

Members of the Civil Aeronautics Board will not throw "roadblocks" in front of the proposal, Nutter said, even though CAB has held the Hovercraft to be a surface vehicle, rather than an aircraft. (It operates on its own air cushion and cruises equally well over water or land.)

CAB members realize the "surfacecraft" will be operated by an airline — San Francisco-Oakland Helicopter Airlines—but assured Nutter they realize that if the Port operated the vehicles they would be competing unfairly with the helicopter airline. That might mean, Nutter said,

that the Port would find itself without a local service airline and without Hovercraft when the year-long "pilot" test of Hovercraft ends here.

Oakland is the first U.S. city to plan a Hovercraft operation, and that fact led Commission President George J. Vukasin to protest when Nutter informed him the first Hovercraft will be demonstrated in this country by its British makers this fall at Houston, Tex., in a trade fair exhibit.

A national defense waiver will be forthcoming, Nutter said, so the Bureau of Customs can permit the Hovercraft to operate here even though they are "foreign bottoms."

"Buy American" laws won't apply, government officials assured Nutter, because the Port will lease the Hovercraft from its British builders.



## Firm Here Asks to Use Hovercraft

An application to operate Hovercraft here has been filed with the Civil Aeronautics Board by San Francisco-Oakland Helicopter Airlines Inc., in the second major step toward pioneer operations of the craft in the Bay Area.

A preliminary application for a \$1 million grant of federal funds was made two weeks ago by the Port of Oakland, to the Housing and Home Finance Agency in Washington.

The \$1 million — with an additional \$500,000 from the City of Oakland — would operate the Hovercraft service here for about a year.

If successful, it would be the first such venture.

## Port Seeks Grant for Hovercraft

Port of Oakland commissioners have decided to go ahead with plans to bring British-built Hovercraft vehicles to the Bay Area.

The commissioners resolved yesterday to make application for a \$1 million grant from the Federal Housing and Home Finance Agency.

This would pay for two-thirds of the cost of the craft.

The balance will be sought from the City of Oakland and San Francisco-Oakland Helicopter Airlines Inc., which would operate the vehicles.

Hovercraft are a radical new departure in transportation because they ride above either land or water on a cushion of air.

It is planned to operate them to the Metropolitan Oakland International Airport from downtown San Francisco, Marin County, Berkeley and downtown Oakland.

They would fly over water for most of the distance, but could carry passengers over open land right up to the airport terminal.

It is currently planned to operate two of the craft in a year-long test program to see if they are feasible in this area.

## Hovercraft — Boat, Bus Or Plane?

Oakland's application for "hovercraft" service is being delayed while federal agencies try to decide this week in Washington whether the thing is a plane or a boat — or perhaps a bus.

The Port of Oakland has made application for a \$1-million federal grant for the first or "pilot" Hovercraft service in the U.S.

Hovercraft are believed to have a bright future here because they can skim across land and water equally well. They were touted this week as the device that will one day link the Oakland and San Francisco airports in one unit.

But in Washington Friday, the Civil Aeronautics Board will meet to decide which of several agencies should handle hovercraft development and regulation.

CAB Chairman Alan S. Boyd, calling Friday's meeting, told other agencies that in Great Britain, where hovercraft were pioneered, the machines are defined as aircraft.

He has invited the Federal Aviation Agency, Interstate Commerce Commission, Treasury Department, Coast Guard, Bureau of Customs and the Federal Maritime Commission to discuss the question.

Hovercraft would be operated here by San Francisco-Oakland Helicopter Airlines. The machines move upon a cushion of air created by their own rotor blades.

Oakland is to put up an additional \$500,000 for the project.



## CAB Bans Usage of Hoppers

The Civil Aeronautics Board has deflated any immediate ideas of Hovercraft air-cushion commuter service throughout the Bay Area.

The Port of Oakland had offered to put up \$137,206, if, on a 2-for-1 basis, the Housing and Home Finance Agency will match this with an additional \$823,237, thereby allowing a year-long experimental budget of \$1,234,855.

But the CAB ruled in Washington yesterday that it was still too early to allow San Francisco & Oakland Helicopter Airlines a permit to use Hovercraft.

The CAB held there was not sufficient factual basis to permit the experiment at this time. It then scheduled a Friday meeting with the Interstate Transportation Commission and the Maritime Commission to discuss the whole question of air-cushion machines.

The CAB said application for the permit did not detail either the scope of the proposed operation or how extensive a substitution was planned for existing helicopter service.

"Until this arrangement is worked out," the CAB said, "we are unable to evaluate the impact of the air-cushion experiment upon the lines' certificated helicopter operations."

The Oakland Port Authority's plans for a year-long test called for two of the 20-passenger Hovercraft to be leased by the Helicopter service from Bell Aerosystems Co.

## Splits on Hovercraft

Whether a forthcoming "Hovercraft" line will operate from Oakland to San Francisco airport was in dispute in a meeting of the board of commissioners of the Port of Oakland.

Commissioners agreed yesterday that the new operation should bear the name of Oakland in its title and advertising.

But they split on the question of service to the airport across the Bay.

Commissioner Peter Tripp voted against service to San Francisco Airport, contending that Oakland is putting up the local money for the project — and San Francisco's airport competes with Metropolitan Oakland International Airport.

The Port of Oakland's pending application for \$1 million in Federal Housing and Home Finance Administration funds for Hovercraft service specifies routes between the two airports, and to San Rafael.

It is to be operated by San Francisco-Oakland Helicopter Airlines. Tripp argued against the emblazoning of that firm's name on the new air-cushion Hovercraft when they arrive.

"I will vote against any spending of the money of the port commission for any action that will advertise San Francisco," he said.

But Tripp was alone in his opposition to the service to San Francisco airport.

Tripp's objections were echoed at first by commissioner Edward G. Brown who declared, "We are not going to contribute \$93,000—\$125,000, and maybe \$40,000 more, to move people off of our airport to San Francisco's airport."

But Brown recanted when Port Executive Director Ben E. Nutter and other officials expressed the fear that any attempt now to delete San Francisco airport would jeopardize the application for federal funds.

Commissioner Joseph W. Chaudet explained that efforts for the promotion of the Oakland airport have stressed "regional" benefits. Hovercraft here, he noted, will ultimately serve all areas of the Bay.

In other action yesterday, commissioners affirmed the position of Nutter and his assistant, Lloyd MacDonald, in opposing the Alameda city planning board's approval of a proposed housing development near the Oakland airport's north end.

Port officials fear that a residential development will break the anti-noise barrier they hope to keep intact as insulation against the sound of supersonic transport planes of the near future.

## Federal Funds for 'Hovercraft' Asked

A fiscal year and its money have come and gone — but the Port of Oakland is sure it can get funds for Hovercraft in the forthcoming federal budget.

Port commissioners agreed

yesterday to "reactivate" their application for \$1 million in federal money for a year-long experimental project to operate the air-cushion vehicles around the Bay from Metropolitan Oakland International Airport.

Still unsolved are the problems resulting from the fact that the proposed Hovercraft are British-built vehicles. The federal maritime statutes prohibit the operation of "foreign bottoms" in U.S. domestic waters.

And that problem resulted after the federal Civil Aeronautics Board vetoed the application of San Francisco-Oakland Helicopter Airlines to operate the Hovercraft here under the auspices of the Port. The CAB ruled that Hovercraft are surface craft, not aircraft.

Ben E. Nutter, the Port's executive director, told commissioners yesterday that the legal obstacles will doubtless be resolved. His authority for that, he said, is John C. Kohl, assistant administrator of the Federal Housing and Home Finance Administration, which heads the Hovercraft experiment in the U.S.

Funds, Nutter said, can come from a new \$375 million public transit bill expected to get final approval in Congress.

Commissioners agreed that they will travel to Washington, D.C., after that bill is passed, to support their Hovercraft application.



# Hovercraft Gets CAB Green Light

OCT 22 1964

Some of the obstacles to a hovercraft operation from the Metropolitan Oakland International Airport have been overcome, according to Ben E. Nutter, executive director of the Port Commission.

Nutter told a meeting of the Board of Port Commissioners yesterday that the Civil Aeronautics Board has indicated willingness to issue permits for hovercraft service under certain conditions.

These conditions include the operation of the craft by a company having air carrier authority.

The radical method of locomotion of the hovercraft, which sail over land or water on a cushion of air, has raised many problems as to who should have jurisdiction and responsibility for the vehicles.

Nutter also reported that the Coast Guard has indicated that it will regulate the hovercraft for safety of marine navigation.

He said that the Federal Maritime Commission has expressed the opinion that certification to operate is not required from them.

The Port has proposed a 20-month demonstration project with two hovercraft to be operated by San Francisco-Oakland Helicopter Airlines.

Nutter returned last week from a visit to Houston, Texas, where he witnessed a demonstration of a hovercraft.

Other board members will be given a demonstration next week in New Orleans.

In other action yesterday, the

board was host to Rear Admiral John Harlee, chairman of the Federal Maritime Commission.

Following a Chamber of Commerce luncheon at which Admiral Harlee spoke on "Oakland . . . An Artery of World Commerce," he returned to the port offices to answer questions regarding the operation of the maritime commission.

The commissioners also awarded a 30-year service pin to Richard N. Compton, secretary of the board.

Compton began working with the Port in September, 1930 as a part time warehouseman, stevedore and dock clerk.

He became the board's secretary in 1954.

OCT 15 1964

## Airport Study Of Hovercraft

San Francisco airport officials have been asked by Oakland to study their potential role in forthcoming Hovercraft transportation throughout the Bay Area.

Federal Government officials, who are to put up \$1 million for the Hovercraft experiment at Oakland, want San Francisco's recommendations.



# City to Try Again For Hovercraft

Business and civic officials attempting to promote a Bay Area ~~"hovercraft"~~ shuttle service from the Metropolitan Oakland International Airport will meet in Washington, D.C. Tuesday to make another effort to get an \$800,000 federal grant.

Michael Bagan, president of San Francisco-Oakland Helicopter Service, said yesterday he would appear with the promoting group as business carrier for the 20-month trial project.

Joining Bagan in Washington will be Oakland Mayor John C. Houlihan, Port Commission Vice President Edward G. Brown and the Commission's assistant executive director, Lloyd S. MacDonald.

The Port Commission's executive director, Ben E. Nutter, said the Civil Aeronautics Board

already has said it would be willing "to permit" hovercraft service on a proper showing that the multi-surface machines were being operated by an air carrier authority.

This word from the CAB settled in part what had been the difficult problem of ascertaining which federal agency would have jurisdictional authority of the seven-ton air cushion vehicles.

The Port has proposed a 20-month demonstration project

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with two hovercrafts to be operated by SFO Helicopter Airlines under contract to the Port. The Coast Guard has said it would regulate the crafts insofar as safety of marine navigation was concerned. The Federal Maritime Commission has indicated its specific approval might not be needed.

# Hovercraft Service For Bay in August?

Hope that Federal financing for "hovercraft" operation will be approved early next year and that passenger service will start from the Metropolitan Oakland International Airport by August was expressed by Port of Oakland officials today.

Lloyd S. MacDonald, assistant executive director of the Port, said an application for a \$708,207 grant has been resubmitted to the Federal Housing and Home Finance Agency.

An earlier application bogged down in details but HHFA officials have assisted with the new request, removing barriers to approval.

The grant would finance a 20-month trial operation of a new type of air-land vehicle that skims over four-foot waves and three-foot solid substances, at speeds up to 75 miles an hour.

It would be used here to transport passengers between Oakland and San Francisco and downtown San Francisco.

MacDonald said a 20 - month trial program is planned. During the first six months, the Port would lease two of the vehicles from Bell Aerosystems Co., acquire terminal facilities and draft an operational sched-

ule.

During the succeeding 12 months, the service would run up approximately one - million passenger miles of service. Service would be evaluated in the final two-month period.

Operation would be by San Francisco - Oakland Helicopter Airlines, with Jack Lambert, senior engineer on the Port staff, designated as project manager.

The application calls for an initial operation of 10 departures daily except Saturdays and Sundays from the airport, with a transbay running time of 15 minutes between the airports and 16 minutes to downtown San Francisco.

The vehicles would dock like a boat at the San Francisco terminus, but make ground landings at airport gates.



to 300 passengers on the numerous rivers which bisect the country.

# Hovercraft, Rapid Transit Trains And Hydrofoil Boat Will Speed Public Travel

TR 5C JAN 24 1965

By JIM HAZELWOOD

Boats with wings, aircraft without wings, and trains without engines will soon have people zipping and skipping around the Bay Area at unprecedented speeds.

After decades of virtually standing still in the development of new types of carriers, the transportation industry is preparing a breakthrough on three important fronts.

The results should provide a speedy revolution in public transportation which will go a long way toward setting people free from their nerve-jangling servitude to the automobile.

Three radical new vehicles are now in "Go" condition for the Bay and one of them, the hovercraft, received a blast-off signal from Washington just last week.

## MAJOR DEPARTURE

The other two are the rapid transit train and the hydrofoil boat. Each represents a major departure from the conventional trains, planes, busses and trolleys which have been faithfully carrying Americans from place to place for many years.

The Hovercraft, weirdest of the three, is expected to be in service between Metropolitan Oakland International Airport and San Francisco Airport by next August.

The Hovercraft program awoke from months of dormancy last week when the Housing and Home Agency approved a \$708,207 grant to the Port of Oakland to get a trial service underway.

The Port will put up an additional \$354,104 to finance a 20-month experimental program.

## LAND OR WATER

The British - designed Hovercraft rides over land or water on a cushion of air created by giant fans inside the vehicle.

The smooth-riding Hovercraft, which can skip over fences and other low obstacles, will be able to cross the Bay between the two airports in 15 minutes.

They can fly right off the water and up the beach to land the passenger at the door of a jet plane.

Hovercraft come in a variety of shapes and sizes but the Port has settled for the SR.N5, a single-fan machine sold by Bell Aerosystems under license from Westland Aircraft of England.

Forward motion of the craft is obtained by an airplane-type propeller mounted at the rear.

## 80 MPH SPEEDS

The SR.N5 is capable of speeds up to 80 miles per hour, and the novelty value alone should assure the vehicle of plenty of customers while the service is getting established.

The Port plans to lease two of the Hovercraft from Bell for the 20-month trial period. Presumably, the service will become permanent if the trials are a success.

The most important of the new vehicles, and in many respects the most radical, will

be for both hydrofoils and Hovercraft which could be pressed into service tomorrow, but the futuristic trains will require months of testing to iron out the technological wrinkles.

The electric trains with which the Bay Area Rapid Transit District plans to whisk millions of commuters around 75 miles of track will be unlike anything on wheels today.

A special test program will begin in March on a four-mile stretch of track near Walnut

Creek, and continue throughout the year on a 16-hour day schedule.

The first spike for the new track was driven last Tuesday — the second transportation milestone within the week.

During the program, district engineers will try out hundreds of different components for the system which are being offered by 20 companies.

These include five electrical propulsion systems, three coupling systems, five suspension

systems, four designs for track and roadbed and three automatic fare-collection systems.

At this stage, even the final propulsion system is still in doubt.

The engineers have narrowed it down to two possibilities: an alternating current motor which can pump electricity back into the lines when the cars are slowing down; and a 1,000-volt direct current motor which has other advantages.

The district's engineers stud-

ied, and quickly discarded the idea of a monorail system similar to the ones which operate at Disneyland and Seattle.

Monorails look like the transportation of the future, but there are so many problems involving stability and ease of switching that the engineers decided to keep all four wheels on the track.

Despite all the problems, the rapid transit people are confi-

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dent they will have their 70-mile an hour cars in operation by mid-1968.

Each car will be equipped with a computer which will automatically stop and start it, and tell it how far it is from the car ahead.

If it gets dangerously close, the electronic brain will slow it down.

There will be an "attendant" riding on each car who will be able to slow or stop the vehicle if the computer fails to do its job.

But the man at the throttle in a conventional train will be completely replaced by automatic controls.

#### SAFER THAN HUMAN

Rapid transit engineers explain that he would be useless anyway. The speed at which the trains will operate is too fast for human reactions to control safely.

Hydrofoils, which have been kicking around since Alexander Graham Bell built and raced one at 60 miles an hour on the Bras d'Or Lakes in Nova Scotia in 1918, are finally coming into their own.

The slowness of development of hydrofoils is a mystery, since they eliminate the big stumbling block to increased speed in water transportation.

It is unfortunately impossible to double the speed of a boat merely by doubling the power of the engine.

#### WATER RESISTS

TV and a charm and modeling  
Tickets are on sale at all the  
schools and from members of  
Boy Scout Troop 12 and Albany  
of the American Legion,  
event.

of the engine. The power  
**WATER RESISTS**  
The laws of water resistance are such that power must be increased by the cube of the speed increase.

This means that the power of a boat must be increased eight times to double the speed, leading to impossibly large engines and fuel consumption.

The hydrofoil defeats this drawback by lifting the boat out of the water and planing it along on metal "wings" which have virtually no resistance.

An experimental hydrofoil boat made by FMC Corp. of San Jose is capable of speeds up to 60 miles per hour.

Several companies are investigating the possibility of using hydrofoils to turn the Bay into a broad highway with no traffic lights or intersections.

#### **SMOOTH RIDE**

Hydrofoil boats are so stable when "flying" that passengers can scarcely believe they are travelling on water, even in a moderate chop.

The Russians have been using hydrofoils for years, carrying up to 300 passengers on the numerous rivers which bisect the country.

A hydrofoil service operates between Sicily and Italy, and there are others in Norway and Germany.

FMC has plans for a 48-passenger hydrofoil which it can make as soon as a customer orders one.

The company has potential customers but will not divulge their names, at their own request.

It is known, however, that the Wilson Line of Washington Inc.

is eyeing the Bay Area as a possible site for a hydrofoil service.

The eastern company recently bought five 20-passenger hydrofoil craft which carried more than 100,000 passengers to and from the New York World's Fair, logging some 1,400,000 passenger miles in the process.

Hovercraft, hydrofoils and rapid transit are expected to lift the public right out of the traffic jams where the average commuter now spends so much of his time.

The average motorist, cursing the delay caused by even a minor accident on the freeway, will fervently pray that they get this new hardware rolling as soon as possible.

## NOT FRISCO

### Oakland

#### Port Used?

TR E FEB 11 1965  
Then Say So

Don't call it "Frisco" — and around the Port of Oakland don't even mention it.

Port commissioners yesterday made it a rule that shippers using the Oakland port say so in their schedules and other printed matter.

And the commissioners also want Oakland's name prominently displayed in advertising on new "Hovercraft" vehicles.

Commissioner Peter M. Tripp objected to plans to emblazon Hovercraft with the title of San Francisco - Oakland - Helicopter Airlines. SFOH will operate the new craft here, financed by the Federal Housing and Home Finance Administration, and the City of Oakland.

"Oakland is sticking its neck out," Tripp said, "and all of a sudden San Francisco's name crops up first."

"But it's the name of the company," said Ben E. Nutter, port executive director.

Port attorney J. Kerwin Rooney assured Tripp that HHFA has stipulated that the Hovercraft bear the name of the Port of Oakland and that of the manufacturer, Bell Aerosystems Corp.

"San Francisco will be named on there, too," Rooney said, "but only in the name of the helicopter company."

Commissioner George J. Vukasin objected to certain shipping firms which list San Francisco in their schedules, when they actually ship in and out of Oakland.

"They put Oakland in parentheses," Vukasin said.

Commissioners agreed that future contracts with marine shippers include specific mention of Oakland as the port used.

But — "We're not going to eliminate San Francisco by simply not mentioning it," said commissioner Joseph W. Caudet.

## 2 Hovercraft

TR E FEB 22 1965  
Ferries Ordered

Two 18-passenger Hovercraft vehicles for the Port of Oakland's passenger ferry service have been ordered from a British firm.

The first of the radically new vehicles, which skim over land or water on a cushion of air, will be shipped from Southampton in mid-March.

Bell Aerosystems Inc. of Buffalo, N. Y., placed the order with Westland Aircraft Co.

The Port will lease them from Bell for passenger service between Metropolitan Oakland International Airport, downtown San Francisco and San Francisco International Airport.

They will be operated by the San Francisco-Oakland Helicopter Airlines and are expected to be in use by August.



# Hovercraft Speedup

Hovercraft operations between Metropolitan Oakland International Airport and San Francisco will begin in early June rather than early August.

The earlier date for the first commercial use of the craft in the U.S. was announced at a press conference yesterday by Edward G. Brown, president of the Port of Oakland board.

With Brown at the conference were William G. Gisell, president of Bell Aerosystems Company which will lease the craft to the Port of Oakland under a cross-licensing agreement with Westland Aircraft, Ltd., of England, and Mike Bagan, president of the San Francisco-Oakland Helicopter Service which will operate the hovercraft.

The hovercraft, which ride

across the waves on a cushion of air, will be used in an experimental 20-month program, partially financed by the Federal House and Home Finance Agency. The vehicles will be in actual operating for a one-year period, making 10 roundtrips each week day, four to San Francisco Airport and five to downtown San Francisco with one trip to both S.F. stops. There will be five roundtrips on weekends.

The local operations are expected to provide answers in such areas as operating costs, amortization schedules and feasibility for mass transport.

Bagan said the hovercraft would be supplementary to the cross-bay helicopter service and operate with the same fare. He agreed with Gisell that eventually

reduction in operating cost might permit a Bay crossing for as little as 50 cents.

If the year's experiment proves the practicality of the vehicles, they will be retained as part of the Bay Area's transportation system. In the future, the 20-passenger vehicles would be replaced by large ones which could accommodate up to 150 passengers.

The first hull will arrive in the Outer Harbor Terminal by April 11 with the other arriving about two weeks later. Both will undergo modifications and be equipped with General Electric motors.

The initial operating schedule calls for a roundtrip of 30 minutes between airports and 32 minutes between Oakland and downtown San Francisco.

# Clouds Still Hover Over Hovercraft

TR E MAY 4 - 1965

Port commissioners are uncertain about the future of their new air-cushion vehicle — but they hope it will at least extend through Saturday.

The Port of Oakland hopes to give the first public demonstration of the radical "hovercraft" on Lake Merritt Saturday afternoon, if all the "bugs" can be taken out of the thing by then.

But the future of the ACV (air-cushion vehicle) is cloudy, once its 21-month experimental service here is ended.

The Port's public relations director, Wally Abernathy, said the public demonstration is being planned for 1-3 p.m. Saturday "against the Oakland skyline" on the lake.

## MANY WITNESSES

Commissioner Joseph W. Chaudet said he hopes for "an A-1 trial run if we're going to do it in front of all those people."

The ACV has exhibited some "very annoying" minor problems such as leaky oil lines during engine run-up tests by San Francisco - Oakland Helicopter Airlines here, said Port assistant executive director Lloyd MacDonald. But he added that SFOH and Bell Aerosystems Co. engineers will have the ACV in good order by Saturday.

The first ACV is expected to be in transbay service by mid-summer. A second ACV is en route here now by ship. The "pilot" project at Oakland, largely financed by the Federal Housing and Home Finance Administration, is to run for a year after the craft is operational.

## DOUBTS EXPRESSED

Said MacDonald, "Even if the program works well for a year, I do not see much opportunity for extension."

Once HHFA has a full report on the ACV's service here, "it is unlikely they will want to continue," he said.

The problem is that the ACV is a "foreign bottom"—a British-designed craft brought into the U. S. by Bell. By law it cannot operate in point-to-point

passenger service within America.

Mac Donald said the HHFA obtained a waiver of the law for the local service test project, on grounds the test is necessary for national defense. The Port is only leasing the two ACV's.

There is the hope, he said, that Bell may decide to manufacture the vehicles in this country if the test is successful.

But at present there is no U.S. manufacturer of such vehicles and SFOH could not obtain ACV's for service after the year-long federally-sponsored tests are ended.

# Hovercraft Bound for Oakland

TR E MAR 30 1965

Britain's mysterious "number 007" is somewhere on the Atlantic Ocean today, and is to arrive in Oakland on April 12.

## Secret agent 007?

No. Air-cushion vehicle 007, the first "hovercraft" or "jet skimmer" vehicle to be placed in scheduled operations in the United States.

The vehicle, an amphibious craft that rides on the cushion of air it creates with its own engine, will be put into passenger service here by the Port of Oakland and San Francisco Helicopter Airlines. British designed, it will carry 15 passengers per trip, at speeds up to 80 miles an hour, cruising along up to three feet above water or land.

Number 007 departed Southampton March 12, on the Johnson Line's motor ship Seattle. It will be followed here by a second vehicle.

The local project is a joint venture between the Port, SFOH, the Federal Housing and Home Finance Agency, and Bell Aerosystems Co. The experimental program will operate here about 20 months.



## Public to Get Look at Hovercraft Tomorrow

It's hard to tell if the thing is a boat riding high or an aircraft flying low, but it will be doing it Saturday afternoon.

The first public demonstration of Oakland's new Air Cushion Vehicle — also known as a "hovercraft" — will be held from 1:30 to 3 p.m. on Lake Merritt.

This thing from another country will thrash around the northern shores of the lake at about three-fourths its 75-mile-an-hour top speed, and will be visible from lake vista points, except in the Embarcadero arm.

Mayor John C. Houlihan, and commissioners of the Port of Oakland will attend the demonstration. The craft will be operated by pilot Sam Helms of Bell Aerosystems Co.

The ACV won't begin service probably until mid - summer, Port officials said. A second craft is en route here by ship.

Its British manufacturers call it a Hovercraft. Bell Aerosys-

tems of Buffalo, N.Y., which hopes to build them in this country, calls the thing an Air Cushion Vehicle.

The U.S. government — which is bankrolling this country's first experimental tests at Oakland — calls it a Ground Effect Machine. Locally it has been called a "jet skimmer."

It rides on a cushion of air created by its own fans, and moves forward with a pusher propeller.

San Francisco - Oakland Helicopter Airlines will use the two machines in transbay passenger service for a year, operating them for the Port of Oakland which is leasing them from the federal Housing and Home Finance Agency.

Saturday's demonstration flight (or cruise) will be made from the park area at 14th and Oak Streets, and out over the water. The ACV can cruise over land AND water.



# It's Neither Boat Nor Plane, But It Runs

TR 5C MAY 9 - 1965

Riding the thing is rather like accompanying your wife on her first driving lesson.

Those long and sensational skids. The sudden backward stops. The spinning around and around.

Oakland's own Air Cushion Vehicle showed its stuff to the public in a demonstration at Lake Merritt, Saturday afternoon.

It left the beach at 14th and Oak Streets in a welter of noise and spray and dust, and went rampaging down the lake at up to 55 miles an hour, with pilot

Daniel G. Helms of Textron's Bell Aerosystems Co. in control.

At least he said he was in control.

It is just that riding along on a fan-made cushion of air is different. The ACV doesn't exactly fly, and it doesn't exactly float.

This is the first ACV operation in America, and no one is sure whether the Federal Aviation Agency or the Coast Guard ought to have jurisdiction over the thing's safety regulations.

Mayor John C. Houlihan was among the local dignitaries who took the first ride in the ACV

Saturday. Asked what he thought of it, he glanced at it out of the corners of his eyes and said, "It's very safe."

At one point, with the mayor and the commissioners of the Port of Oakland aboard, Helms slowed the craft down so that its air cushion diminished and it settled down onto the water.

Officials said this maneuver was staged to demonstrate what would happen if the craft accidentally lost power.

Then Helms gave the ACV the power and it puffed up its rubber skirts pridefully and dashed

around and around a small buoy in 40-foot circles, as neatly as a circus trick rider.

Once it is underway, the ACV leaves less wake than an ordinary powerboat, because its fans flatten the waves.

Inside it, a passenger experiences only some slight amount of "compressor whine" from the turbine engine, but the ride is smooth and swift.

The ACV made 14 runs up and down the lake, Saturday, and an estimated 500 people lined the lakeshore to watch it.

The "hovercraft," as it is commonly called, was brought here

for a 12-month experimental test in Bay commuter runs, working out of Metropolitan Oakland International Airport.

Westland Aircraft Ltd., of England, designed and built the ACV, and Bell hopes to produce it in the U.S. under license. But for the test year, the Federal Housing and Home Finance Agency, and the Port of Oakland, will finance the operations here, under lease. San Francisco-Oakland Helicopter Airlines will operate two ACV's — one still enroute here from England.

It's jet powered, with a 1,200

horsepower General Electric gas turbine that drives two fans. One pushes the craft along, and is reversible for backing up. The other blows downward and creates the air "cushion" under the flexible rubber pantaloons.

It can make up to 80 miles per hour and can seat up to 20 persons.

The first ACV, when testing and tuning up are complete, will probably go into service in SFO colors in mid-summer.

The Port of Oakland's share of the cost of the year-long project is \$708,207.

Picture on Page 1

## Second of ... Hovercrafts

### To Be Tested

Oakland's second Air Cushion Vehicle arrived by ship this morning from Great Britain, and will begin service testing this week prior to joining a sister vehicle in this country's first passenger service this summer.

Two of the "hovercraft" vehicles are expected to begin operations around the Bay by June 15, in the colors of San Francisco - Oakland Helicopter Airlines.

The first ACV was shown in a public demonstration on Lake Merritt Saturday.

# Vehicle Flips Over In Test

TR G MAY 11 1965

ALAMEDA — A "hovercraft" air cushion vehicle in test maneuvers with a new pilot overturned in the Estuary today, near the Naval Air Station here.

The operators — San Francisco-Oakland Helicopter Airlines — said no one was hurt in the accident shortly after 2 p.m.

Mike Bagan, SFO president, said the ACV flipped over in "violent maneuvers" during the transition of one of his helicopter pilots into the radically new vehicle which is to go into passenger service here about June 15.

Four were aboard when the ACV overturned at the foot of Fourth Street: Sam Helms, the project test pilot from Bell Aerosystems Co.; SFO Capt. Buckshot Lein who formerly worked for Pan American World Airways; SFO vice president John Cunningham, and Commander Steve Dasovich, a Coast Guard officer assigned to the ACV test project.

Bagan said the maneuvers were "operational tests."

"This thing is new," he said, "and we've got to know the answers."

He said the maneuvers today

Continued Page 3, Col. 2



Norris D. Garnett, a cultural  
attache whose job involved con-  
tacts with foreign students, was  
accused of "activities incompat-  
ible with the status of a diplo-  
mat." A Soviet Foreign Minis-  
try note told the U.S. Embassy  
here that such activities among  
American diplomats must come  
to a halt.  
"I deny the charges," Garnett  
told a reporter.  
The charges came after nu-  
merous complaints by African  
students of discrimination had  
been published abroad and de-  
nied here. A group of Kenyan  
students went home last month  
and denounced their treatment  
in the Soviet Union.  
The U.S. Embassy denied that  
Garnett had done anything in-  
compatible with his status as a  
diplomat. But it said he would  
leave at the end of this week.  
Garnett also was accused by  
the Foreign Ministry of "inter-  
ference in internal affairs" of  
the Soviet Union.  
The Soviet note was given to  
the embassy's political counsel-  
or, Malcolm Toon. He denied

Ly denied.  
sy said the charge was prompt-  
students here. The U.S. Embas-  
sies activities among African

were of the kind intended to  
find the ACV's limitations be-  
fore it enters passenger service.  
The craft was taken in tow  
by a Navy crashboat and was  
to be brought to the Naval Air  
Station here where it would be  
set right side up by a crane.  
Bagan said he thought it could  
be brought back to his base at  
Oakland International Airport  
under its own power.

SFO now has two ACV's —  
this one brought here a month  
ago for tests and a second one  
delivered here yesterday.

This one was shown to the  
public in 14 runs on Laek Mer-  
ritt, Saturday, with Mayor John  
C. Houlihan and Port of Oak-  
land officials aboard.

It is a British-built vehicle,  
brought to this country by Bell  
under a U.S. government-spon-  
sored test project for potential  
use in commercial service. The  
Port of Oakland is leasing the  
pair of ACV's for a 12-month  
test, and SFO will operate  
them.

# Hovercraft

## Flips Over;

## 4 Rescued

The seven-ton "Hovercraft," introduced to the public on Lake Merritt last Saturday, overturned off the south shore of the Alameda Naval Air Station in its first day of bay tests.

The four persons aboard the craft escaped injury when it flipped making a sharp turn at high speed yesterday afternoon. They made their escape through "pop-out" windows, and were quickly rescued by a Navy crash boat which had been standing by. The Hovercraft travels above water on a cushion of air.

John Cunningham, vice president of San Francisco-Oakland Helicopter Airlines and one of the passengers aboard, reported the craft was making "violent maneuvers" when the accident occurred.

This included high speed turns, stops, starts, and other maneuvers to determine the craft's capabilities.

Capt. Buck Lein, the pilot, said he was in a tight right turn at about 55 m.p.h. when the craft gently tipped over after catching its starboard side on a wave.

After being towed to the air station docks, the British-built vehicle was righted, placed aboard a trailer and hauled back to the company's headquarters at the Metropolitan Oakland International Airport for repairs.

The ACV Hovercraft has two large holes in the portside hull, bent propellers, damaged radar and a hatch is missing. Damage estimates could not be given immediately.

Besides Lein and Cunningham, Sam Helms, Bell Aero Space instructor, and Coast Guard Comdr. Steve Dasovich were aboard.

SFO now has two ACV's — the disabled one and one that arrived Monday. They were shipped here by Bell Aerosystems Co. under a U.S. Government-sponsored test project for potential use in commercial service.

## Permit Issued For Hovercraft

San Francisco-Oakland Helicopter Airlines has been granted the first Civil Aeronautics Board permit to operate air-cushion vehicles in commercial service.

The year-long authority will extend from the date the service begins this summer, or until Dec. 31, 1966, at the latest.

SFO expects to begin operations across the Bay about June 15, using the second of two ACV's to arrive here recently. The first "hovercraft" was damaged in a testing accident May 11.

# Hovercraft Undergoing Test Runs

Oakland's two air-cushion vehicles have begun a two-day series of "shakedown runs" on the Bay, opening a month-long series of test cruises.

The month of rigorous testing, officials of the Port of Oakland said, will precede the inauguration of this country's first commercial "hovercraft" service July 1.

Shakedown runs began yesterday, under the direction of Peter Lamb, chief hovercraft pilot for Westland Ltd., the British builders of the machines. Lamb will test recent modifications resulting from the capsizing of one ACV in the Bay on May 11, and a similar accident during service tests by the Norwegian government.

Lamb will turn the ACV's over to Sam Helms, chief ACV pilot for Bell Aerosystems Co. of Buffalo, N.Y., which brought the machines into this country under license.

Helms will turn the ACV's over to San Francisco-Oakland Helicopter Airlines which will operate the machines in transbay service here. The Port of Oakland is leasing them for a year-long operation.

Tests will see the ACV's operating under the Bay Bridge, and to two points in San Francisco.

The ACV's will operate out of Metropolitan Oakland International Airport, to San Francisco airport and to San Francisco.



FROM AIRPORT

JUL 22 1965

## Hovercraft Starts Bay Runs Aug. 10

Bay Area residents will be able to commute by hovercraft starting Aug. 10.

The 39-foot-long craft will make seven daily round trips between downtown San Francisco and Metropolitan Oakland International Airport. Three trips will be between the Oakland airport and San Francisco International Airport.

There will be one daily trip between San Francisco International Airport and the Ferry Building in San Francisco, but it has not yet been decided

whether it will be open to the public, according to John Cunningham, vice president of San Francisco - Oakland Helicopter Airlines. The purpose of the trip is to station a hovercraft at the Ferry Building and current thinking is to restrict the passenger list to non-paying VIPs.

The price of the rides will be \$8.50 a passenger one way, the same as helicopter fares. The hovercrafts will carry 15 passengers and are capable of traveling at 80-mile-an-hour speeds over water on a self-generated cushion of air.

Cunningham said Oakland is getting preferential treatment because the Port of Oakland is the sponsoring agency for the one-year hovercraft test on the bay. He noted that the port has \$100,000 of its own money tied up with the \$1.3 million testing fund advanced by the U.S. Housing and Home Finance Agency.

## Experts Pay Tribute To the Hovercraft

Performance of air cushion vehicles, such as those which are to go into operation across the Bay on Aug. 10, are extremely impressive, it was reported today.

A discussion of the vehicles came at the meeting of the American Institute for Aeronautics and Astronautics in San Francisco.

Remarks were by Joseph L. Wosser Jr. and Hugh M. Neeson of Textron's Bell Aerosystems Co. of Buffalo, N.Y.

Such craft have been tested all the way from Greenland to the equator, they said.

Surface and wind conditions have varied from soft snow to ice-packed ridges in the Arctic,

10-foot high cane patches and water hyacinth beds in Florida, 50 miles winds on Lake Erie and 12-to-18-foot waves in the Atlantic.

They predicted the craft would have high passenger acceptance.

The craft on the Bay will be sponsored by the Port of Oakland and will be operated by San Francisco-Oakland Helicopter Airlines between here and San Francisco and San Francisco International Airport.

The tests were on the 30-ton Hydroskimmer, the Navy's largest such craft, the Bell Carabao, a 1-½ ton tri-cell craft and the Bell SK-5, a seven-ton passenger and utility skimmer. The two here are of the SK-5 variety.



## One Worked Beautifully —One Didn't

Oakland's new hovercraft began carrying passengers across the Bay today.

That is, ONE of them did. The second Air Cushion Vehicle (ACV) broke down 50 yards offshore, in an inlet south of Metropolitan Oakland International Airport, stranding a corps of newsmen who stood on its bobbing deck and waved gaily as the other ACV went storming past.

The one that worked, worked beautifully.

It carried Mayor and Mrs. John C. Houlihan of Oakland, Edward G. Brown, president of the board of commissioners of the Port of Oakland, and the more fortunate members of the press, from Oakland airport to San Francisco airport in 25 minutes — just as scheduled.

At San Francisco, Mayor Houlihan was greeted by airport manager George Hansen and other San Francisco dignitaries. Houlihan then "hovered" back to Oakland airport — again in just 25 minutes — to preside over ceremonies marking this country's first commercial hovercraft service.

The ACV was piloted, west-bound, by Capt. Howard Premo of San Francisco-Oakland Helicopter Airlines, and on its return voyage was piloted by John Cunningham, SFO airlines vice president for operations.

It left from airport gates, roared along paved taxiways, past slowly taxiing jetliners whose passengers stared at the odd-looking ACV, and entered and left the Bay with a rush and swoop down black-topped grades.

It literally leaps in and out of the water on its self-made cushion of air.

The second ACV, planned as a "back up" for today's inaugural flights, floundered in an inlet at Oakland airport about 11 a.m. Ben E. Nutter, executive director of the Port of Oakland, said a balky jet engine was the cause.

Regular passenger service began today at 4:50 p.m. from Oakland airport.

## Hovercraft Launches Bay Service-- Like a Motorboat

It had to go it alone—but the nation's first hovercraft went into commercial service from Oakland as planned, skimming to San Francisco airport in 25 minutes.

The ride was no bumpier than an ordinary outboard motorboat.

But this country's first scheduled Air Cushion Vehicles had problems yesterday, even though one performed as well as city and federal officials had hoped.

Oakland has two ACV's. One of them, carrying Oakland Mayor John C. Houlihan, dashed to San Francisco on time. The other, loaded with press photographers, foundered 50 yards offshore at Metropolitan Oakland International Airport, when a fuel line plugged.

The second ACV was back in service in about an hour.

The two will offer the public 10 daily round trips between Oakland airport and San Francisco airport, and a downtown San Francisco site in the Marina, at Mission Rock, where it will embark from a beach.

At airports it merely roams up from the water on its self-made air cushion and stalks along airport taxiways to terminal doors.

The machines are being operated from Oakland by San Francisco-Oakland Helicopter Airlines, under a \$100,000 subsidy from the Port of Oakland and a \$1.3 million grant from the federal Housing and Home Finance Agency. It is the first commercial use of the vehicles in the United States.

Pilot Cliff Viera of Fremont had trouble with the "backup" ACV, yesterday, carrying six newsmen. It stalled just offshore from Oakland airport, and rowboats rescued the press corps.

Viera as his stalled machine drifted toward the rocky shoreline, commented, that "This is something new for a helicopter pilot."

SFO airlines will continue its regular transbay helicopter operations, supplementing them

—at the same \$8.50 price—with the novel hovercraft trips.

The ACV's are being tried out in the U.S. in what the HHFA calls a "pilot project" at Oakland. British-designed and built, they are handled in this country by Bell Aerosystems Corp. of Buffalo, N.Y., with an eye to U.S. manufacture and use if the local project works out.

The Oakland pilot project is to run through Dec. 31, 1966.



# Traffic Jams Don't Exist For Air Cushion Vehicles

JR 5C AUG 8 - 1965

Whatever else it is, a "hovercraft" is a machine that carries people.

It is slower than most helicopters, and faster than most boats. Traffic jams have nothing to do with it at all.

Basically, the air cushion vehicle that begins America's first regularly scheduled passenger service Tuesday, at Oakland, is a kind of a round-looking thing that howls and roars and makes spray.

It is powered by a 1,000-horsepower marine turbine (jet) engine that turns its "fans." Ducted horizontal fans create

the cushion of air on which the ACV rides.

Another fan is a vertical propeller, at the rear, that pushes the ACV along at speeds up to 80 miles an hour.

In service the ACV will cruise at 45-60 m.p.h., traveling from Metropolitan Oakland International Airport to San Francisco International Airport in 25-30 minutes — from start engine time to stop engine time.

The ACV is 39 feet long. It weighs seven tons. It can carry 15 passengers and its pilot.

Oakland's hovercraft service is the first in this country, but not in the world.

Norway began operating ACVs last year, in coastwise service, but suspended the project temporarily after an ACV capsized. All eight persons aboard were rescued unhurt.

In the Estuary, an SFO hovercraft flipped over, but its four crewmen swam away from it unhurt. The machine wasn't seriously damaged.

Since then, the tendency of the vehicle's rubber "skirts" to plow under at high speeds, pulling the craft off balance, has been rectified by drilling holes in the skirts to break the suction. There have been no further accidents.

# Hovercraft to Open Travel Experiment

By BILL EATON

Does it fly?

Does it float?

Whatever it does, it starts doing it regularly on Tuesday.

It has been called "hovercraft," but technically it is an air cushion vehicle.

And it belongs to Oakland.

Tuesday, at 11 a.m., the thing begins its first scheduled passenger service across San Francisco Bay, in a huge triangle with its base at Metropolitan Oakland International Airport.

This is the first time that such a machine has operated in passenger service, on a schedule, anywhere in the United States.

The ACVs — there are two of them here — will be operated by San Francisco-Oakland Helicopter Airlines, from SFO's base at the Oakland Airport.

They will supplement SFO's regular helicopter runs throughout the Bay Area and the East-bay.

The price is the same — \$8.50 across the Bay whether a passenger flies in a helicopter or flies (or floats?) in the air cushion vehicle.

Oakland's ACV operations on Tuesday mark the start of what is called a "pilot project" for ACVs in this country.

If the machines pay off in service here, between Tuesday and Dec. 31, 1966, they may become standard operating equipment throughout the country, wherever shortline transit is required over land and water without roads and rails.

The two at Oakland are model SK-5s, designed by Westland Aircraft of Great Britain and being developed in this country under license by Bell Aerosystems Co. of Buffalo, N.Y.

Bell pilots and engineers have worked with SFO Airlines pilots for nearly a year.

Oakland ACVs will operate three daily round trips between

the Oakland Airport and San Francisco International Airport.

They will operate seven daily round trips between Oakland International and downtown San Francisco.

They'll begin with a once-daily round trip between the Ferry Building in downtown San Francisco, and San Francisco Airport, but development of that route still isn't certain.

The Port of Oakland has agreed to invest \$100,000 in the ACV venture here. The Federal Housing and Home Finance Agency is sputting up \$1.3 million.

SFO Airlines was chosen to handle the ACV in service because it has the experience, personnel and maintenance facilities for the job.

Port of Oakland officials are calling the thing the Jet Skimmer, because it is powered by a jet turbine engine and, figuratively, skims across land and water.

Actually, the ACV operates atop a cushion of air it creates itself with its huge horizontal fan.

Its rubber "skirts" confine that cushion so that the vehicle doesn't touch water, nor land, and can clear a three-foot-high solid obstacle if it must.

It is this technicality about its flying or floating that has resulted in a quandary for federal agencies which are to regulate it in service.

The Federal Aviation Agency regulates things that fly, and the U.S. Coast Guard regulates things that float.

At present, the Coast Guard has been given the responsibility for regulating the safety of the vehicle while it is working up and down the bay.

But the FAA's inspectors are keenly interested in the care and maintenance of the whatever-it-is.



# Hovercraft Has Shortage Of Transbay Passengers

OCT 18 1966

Oakland's two hovercraft are carrying only about 30 per cent of their capacity in revenue passengers, and have hauled only 935 passengers across the Bay since they began their "jet skimmer" flights early in August.

Port of Oakland officials think the lag may exist because publicity value in the radically new vehicles "has not been exploited."

They also think they could increase passenger use if the Federal Aviation Agency would let them use the machines for Sunday excursion tours, and not just in scheduled transbay passenger service.

A report by Jennings Smith, port director of fiscal affairs, showed that the hovercraft carried an average of 5.3 revenue passengers per flight from Aug. 10-17, 6.0 from Aug. 18-31, 3.3 from Sept. 1-14—presumably after youngsters returned to school and quit taking rides for the novelty of it—and 2.3 from Sept. 15-30. The total for the two months averages out to 4.1 passengers per flight, a load factor of only about 30 per cent.

Average gross revenue per flight for the two months was just \$30, Smith reported, and he said the hovercraft passenger averages declined even while the number of days the machines operated was increasing from an average eight days in

mid-August to 16 in the last half of September. The number of revenue flights was increasing, too, while the load factor decreased. Revenue flights numbered 36 in mid-August and numbered 72 in the last half of September.

More people are using hovercraft to go from Oakland International Airport to San Francisco airport (a 42 per cent average load for the two months)

than from San Francisco airport to Oakland airport (a 16 per cent average load).

The advent of the unique air-cushion vehicles here marked the first scheduled passenger service by hovercraft in the United States, in a year-long experimental program subsidized mainly by the Federal Housing and Home Finance Administration, and to a lesser degree by the Port of Oakland.

# Hovercraft Carrying Peak Loads

AUG 18 1966

Oakland's hovercraft have been carrying capacity loads to San Francisco in the week since they began this nation's first commercial air-cushion vehicle service.

But one of four daily round-trips between Oakland airport and San Francisco airport has been cancelled by San Francisco-Oakland Helicopter Airlines because of darkness. That is the flight that left Oakland daily at 7:10 p.m.

SFO airlines, which operates the "Jet Skimmer" craft for the Port of Oakland, has reported to Port commissioners that daily westbound flights from Oakland airport carry full loads of 15 passengers each.

Coming eastward, they carry about 60 per cent loads.

"I was afraid of that," said Commissioner Peter M. Tripp. He opposed the hovercraft project here from the first, feeling it would be carrying prospective Oakland airport passengers to San Francisco airport.

SFO airlines said its capacity loads to San Francisco consist of "legitimate air travelers," not sightseers.

Roundtrips leave Oakland airport daily at 7 a.m., 8:05 a.m. and 4:40 p.m., returning to Oakland by 7:45 a.m., 8:50 a.m., and 5:35 p.m.

The ACV's are to operate here until December, 1966, under a federally-subsidized experimental program to determine their worth as commercial transportation vehicles.

They operate in addition to the regular helicopter flights of SFO airlines.

## **LANDING SITE**

### **Hovercraft**

### **Dedication**

### **Draws Snub**

NOV 1 - 1965

San Francisco's port officials snubbed the Port of Oakland's dedication of a new hovercraft landing site in San Francisco this morning, terming Oakland's invitation "provincial."

The dedication of the "hoverport" at Pier 50-B, at the foot of Fourth Street, went off as planned with Oakland's two hovercraft carrying a few San Francisco officials on short pleasure tours.

Hovercraft service from the new site, operated by San Francisco-Oakland Helicopter Airlines, began shortly after the 11 a.m. ceremony.

Commissioners of the San Francisco Port Authority boycotted the opening.

The reason given for the snub was that San Francisco wasn't named as a co-host in the official invitations sent out by the Port of Oakland which listed as hosts the Oakland port commissioners, SFO Airlines, and Textron's Bell Aerosystems Co., which builds the British-designed hovercraft in the U.S.

Cyril Magnin, president of the San Francisco Port Authority, said he didn't get an invitation but saw one. He did not attend.

Continued Page 4, Col. 1



DEFINITION NO EXTRA  
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in Shop

# Carving Out a Market

NEW YORK—A trade source expects 7 million electric knives to be sold this year.

ing booth, unhappy Democrats will remember the faith of their fathers, and vote for Beame, however, unenthusiastically.

Continued from Page 1

today, he said, because, "We went out of our way to provide this facility and the least they (Oakland) could have done was mention our name. It would have been normal, decent courtesy."

Mayor John F. Shelley didn't attend, but his secretary said it was because his invitation didn't arrive until Friday and Shelley "regretted" that previous commitments interfered.

San Francisco Supervisor William C. Blake attended, and said the lack of official attendance by the San Francisco Port Authority was "shocking."

A spokesman for the Port of Oakland said the invitation didn't mention San Francisco because San Francisco has no part in the operation of the hovercraft.

The air-cushion vehicles are being operated by the Port of Oakland under a Federal Housing and Home Finance Agency subsidy for the first such commercial use of the machines in the U.S.

# Oakland-S.F. Hovercraft Tiff Still Fluttering Along

Oakland port commissioners may be "provincial" but San Francisco Port Authority members are "cry babies"—if you listen to what they're calling each other today.

The dispute behind the names is over whether Oakland should have let San Francisco be co-host for the dedication of a new hovercraft landing site.

On one hand, the new "hoverport" is in San Francisco.

On the other hand, Oakland is renting the new site and paying for all improvement costs.

The San Francisco Port Authority members snubbed the dedication yesterday.

## NO APOLOGIES

The Port of Oakland, though, won't apologize for leaving San Francisco's name off the official invitations as a co-host.

Cyril Magnin, president of the

San Francisco Port Authority said Oakland's attitude is "provincial."

Peter M. Tripp, member of the Oakland port board of commissioners said San Francisco Port Authority members behaved like "cry babies" because Oakland has the only commercial hovercraft service in the U.S.

## \$50,000 OUTLAY

The \$50,000 cost of paving and other improvements for the San Francisco hoverport, at Pier 50-B at the foot of Fourth St., will come out of hovercraft "project funds" put up by the Port of Oakland and by the Federal Housing and Home Finance Agency which is sponsoring the hovercraft experimental program at Oakland.

The snub came yesterday at the 11 a.m. dedication. Magnin

said he never got an invitation, but he had seen one and didn't like the fact that the hosts were named as the Port of Oakland, San Francisco-Oakland Helicopter Airlines, which is operating the hovercraft, and Textron's Bell Aerosystems Co. which is building the British-designed machines in the U. S.

## MAGNIN IRKED

Edward G. Brown, president of the Oakland Board of Port Commissioners, said he talked on the telephone with Magnin last Friday evening, and Magnin was irate.

Brown said Magnin "suggested we write a letter to the Port of San Francisco apologizing for not mentioning them," but Brown said he and two other Oakland port commissioners agreed there was no need to apologize.

# PUC to Air Control of Hovercraft

The California Public Utilities Commission today ordered an investigation to find out whether San Francisco-Oakland hovercraft should come under commission control.

SFO Helicopter service has not applied for the commission's permission to operate the service, which shuttles passengers across the Bay on five round trips a day.

The air -cushion hovercrafts are being operated under a Federal Housing and Home Finance Agency subsidy. It is the first commercial use of the machines in the U.S.

The hovercraft is a jet powered vehicle which rides on a cushion of air.

Service began last August between San Francisco and Metropolitan Oakland International airports and the Ferry Building in San Francisco.



7 DEC 14 1965

# Family Rates on Bay Hovercraft

New family excursion fares are in use today on Oakland's "jet skimmer" hovercraft transbay service.

The new fares were urged by the Port of Oakland in an attempt to boost lagging passenger use of the radical new machines.

Dwane Wittmayer, vice president in charge of sales for San Francisco - Oakland Helicopter Airlines, said the excursion fare is \$6 for the head of a family and \$1 for each additional family member between Oakland International Airport and the downtown San Francisco hoverport at Pier 50.

Regular passenger fare is \$8.50. Excursion rates will be available on all jet skimmer flights, daily and weekends. SFO Airlines operates the vehicles on four roundtrips a day between Oakland airport and downtown San Francisco, in addition to its flights between Oakland airport and San Francisco airport.

SFO Airlines operates the skimmers — which "fly" on a self-generated cushion of air four feet high — for the Port of Oakland, under a federal subsidy for the first such commercial use of the machines in this country.

Oakland's hovercraft vehicles have run up a \$120,000 deficit because of a lack of passengers. The Port of Oakland was to decide later today if it wants to seek more federal and local funds to continue the experimental project.

## Hovercraft Near Cash Letdown

JAN 17 1966

The air-cushion vehicles have operated here since early August in the first scheduled commercial use of the radical new machines in the United States.

But revenues are \$120,000 less than was anticipated, said Ben E. Nutter, port executive director.

### FEDERAL AID

He said there is a possibility that the federal Housing and Home Finance Agency, which is subsidizing the bulk of the cost of the project, would be willing to put up two-thirds of the \$120,000.

The remaining third — \$40,000 must be raised locally.

"The alternative to this would be to terminate the project at approximately the end of March, four months early," Nutter said.

He has the informal agreement of Bell Aerosystems Company and San Francisco-Oakland Helicopter Airlines that each would put up a third of the \$40,000, Nutter said. The remainder would have to come from Port funds, Nutter said.

### PASSENGER TOTAL

From August through December the "jet skimmers" have carried a total of 2,386 passengers. They have averaged about 37 per cent loads in transbay service.

Reasons for the short loads, Nutter said, include the fact the operating speed is restricted by the Coast Guard to 50 knots, resulting in longer and fewer trips, and the vehicles are also restricted by the Coast Guard to operating in daylight — missing out on peak hour travel in the morning and evening.

## Signal Red For Bay Hovercraft

JAN 18 1966

Oakland port commissioners will ask the Federal Government for more money to continue its transbay hovercraft operations, which are \$120,000 in the red.

The port will put up \$13,000 of it. Bell Aerosystems Company will be asked to put up a like amount, and so will San Francisco-Oakland Helicopter Airlines.

No money will be put up locally until the port gets approval of the Federal Housing and Home Finance Agency for the extra federal money.

Ben E. Nutter, the port's executive director, said yesterday that inadequate passenger loads since August have resulted in the program running behind projected income. The hovercraft service, first such commercial use of the machine in the U.S., was to run a year here under an HHFA subsidy, aided by

money from the port and from Bell and SFO Airlines.

Nutter said major factors in the low passenger use are conditions imposed on the "jet skimmer" service by the Coast Guard—limiting speed to 50 miles an hour and thus shortening the number of daily trips, and prohibiting flights before sunup and after sundown, precluding operations in peak passenger hours.

Commissioner Peter M. Tripp told the port board yesterday it would be "shortsighted" to curtail the experimental program until the machines have had a chance to work in the busy summer season.

Without HHFA approval for the \$120,000 in extra money, the program would have to end in March.

The hovercraft have carried 2,386 passengers in five months—a load factor averaging about 37 per cent of capacity.



# Hovercraft Faces Uncertain Future

JUN 30 1966

It may be that Oakland's struggling Hovercraft program can be made to go on another three years, but it will have to be with larger models of them-machines, and under a plan for lower fares and additional routes, and without financial assistance from the Port of Oakland.

Proposals to extend the nation's first experimental commercial use of the air-cushion vehicles for more than the original one year are being discussed here and in Washington, D.C.

The one-year program, conducted at Oakland, expires in August. It began with a \$180,000 grant from the federal Housing and Home Finance Agency (HHFA) and \$90,000 from the Port of Oakland, but by January of this year the two British-designed vehicles were carrying only an average of 37 per cent loads in transbay service, and the HHFA had to grant an additional \$79,610 to keep the machines going until August.

A report on a possible three-year extension and expansion of the Hovercraft program was made to port commissioners yesterday by Jack Lambert, the port's Hovercraft project engineer.

Lambert said there has been no final agreement between fed-

eral officials, port representatives, San Francisco-Oakland Helicopter Airlines (which operates the machines here) and Bell Aerosystems Co. (which builds the machines in the U.S. under license).

While the existing program has been "successful in some areas," Lambert said, and has achieved most of the original project objectives, passenger volume and routes have not been developed "to the extent that it is financially attractive to a private operator."

He said continued service will mean additional financial support.

Port commissioners yesterday made it clear they will not contribute funds, but would "sponsor" continuation of the project if the port can be assured of reimbursement for any services it performs.

Lambert said SFO Airlines and the Bell company want to go ahead under these conditions.

But larger Hovercraft must be obtained. The existing SR.N5 vehicles can carry only 14 passengers, and are not large enough to handle smoothly nor travel fast on rough water. A new program ought to have the use of new SR.N6 vehicles which are nine feet longer and carry 30 passengers.

# Group Urges More Hovercraft Service

FRI JUL 7 1966

Continuation of Oakland's transbay Hovercraft service was endorsed today by the Bay Area Transportation Study Commission.

BATS members see the air-cushion vehicles as a necessary adjunct to other forms of Bay Area transportation.

Richard M. Zettel, study director, told members, "I'm

rather excited" about Hovercraft.

Zettel said the commission is interested in "more than rubber-tired and rail transportation."

The federally-sponsored Hovercraft program, conducted for a year under the auspices of the Port of Oakland, is to expire on August 9. Port officials, and representatives of San Francisco-Oakland Helicopter Airlines, are discussing with federal officials fund grants to continue the program for as much as three years more.

SFO Airlines operates two

Hovercraft in transbay service now.

Zettel said that Bell Aerosystems Corp., which makes the British-designed Hovercraft in this country under license, has plans for machines much larger than those now in use here. Current Hovercraft carry 14 passengers. Zettel said proposed Hovercraft may carry up to 90.

Zettel also told BATS members that the federal Maritime Administration, the White House science advisor, and the Department of Defense, have shown interest in extension of the Hovercraft program here.



# U.S. Aid May Save Bay Hovercraft

AUG 11 1966

Oakland's first-in-the-nation Hovercraft passenger service was gaining passenger acceptance at the end and officials here would like to continue it.

During the federally subsidized demonstration year, which ended Monday, two high-speed skimmer craft operated four to six flights daily over San Francisco Bay, carrying a total of 13,600 passengers.

An application for a new three-year federal grant to use even larger craft, will be considered by the Oakland Board of Port Commissioners soon, according to Port Executive Director Ben Nutter.

The jet skimmer service featured neither-fish-nor-fowl craft that rode on a cushion of air, performing equally well over land or water.

## GOOD REACTION

The Hovercraft shuttled between the airports of San Francisco and Oakland and between Downtown San Francisco and the airport in Oakland.

Officials of San Francisco-Oakland Helicopter Airlines, which operated the service, have expressed satisfaction with the performance and reliability of the novel craft and said they had favorable reaction from 85 per cent of the passengers.

However, during the early months of the project, passengers were slow in coming and the British-designed vehicles, which could carry 14 passengers each, were reported as operating at only 37 per cent capacity up to January.

Nutter said that figure rose to about 70 per cent toward the end of the project, with longer days permitting more flights and customers growing more accustomed to the craft.

## FEDERAL GRANT

Nutter said Nicholas Johnson, Federal maritime administrator, has expressed interest in a further Hovercraft project here.

Cost of the year's program was \$1,187,726 with a Federal

Housing and Home Finance Administration grant financing two-thirds of that amount.

The remaining third of the cost was shared equally by the SFO Airlines, Bell Aerosystems and the Port. The Port's contribution of \$131,303 included an allocation of \$93,000 from city funds.

The project's vehicles were Bell SK-5s, an American modification of the SR.N5 Hovercraft produced in England by Westland Aircraft Ltd.

The craft in service here were powered by General Electric LM 100 marine gas turbine engines and other electrical, navigation and communications equipment.

Any new application for federal funds would seek money to finance 30-passenger vehicles and possibly even 90-passenger craft later.

A study of project results and passenger reaction is being prepared for the HHFA by the University of California Institute of Transportation and Traffic Engineering and is expected to be issued within 90 days.

Even if the Port board agrees to make the application for new project funds, the board has made it clear that the Port would make no further contribution.

# Hovercraft Pilot Project

AUG 10 1966

## Comes to End

Oakland's nationwide pilot project to furnish regularly scheduled "hovercraft" passenger service is at an end, but officials may seek another federal grant to finance a three-year extension.

The two 14-passenger vehicles, which ride at high speeds on a cushion of air, ended their trips back and forth across the San Francisco Bay at midnight Monday.

Port of Oakland Executive Director Ben Nutter said the Port will consider asking for another grant which would finance a project using 30-passenger or even 90 passenger vehicles.

# Hovercraft Crashes Into Bay Farm Island Bridge

THE SEP 5 1966

*W. L. W.*

One of the two \$400,000 hovercrafts stationed at Metropolitan Oakland International Airport crashed into a piling of the Bay Farm Island Bridge yesterday, causing heavy damage.

The craft, which had carried hundreds of passengers across the bay in the past year, went under the bridge "and just didn't make it through," according to witnesses.

Three persons were aboard the

weird-looking, futuristic vehicle. No one seriously injured.

The craft, a cross between a boat and plane which skims above the water on a cushion of air at up to 75 miles per hour, is owned and operated by Bell Aerosystems Co. of Niagara Falls, N.Y.

It previously had been operated by San Francisco-Oakland Helicopter Airlines on a one-year experimental basis, but had been turned back to Bell pending SFO's application for federal funds to begin scheduled service with larger hovercrafts. The two existing crafts carry 14 passengers.

The damaged hovercraft,

Continued Page 6, Col. 5

severe, and the craft remained afloat.

Pilot Jimmie Sober, 29, of 671 Laurette Place, Hayward, said he had to slow the 22 foot, nine-inch wide craft to less than 10 miles per hour to guide it through a 30-foot wide section of the bridge. The slow speed, he said, caused it to veer slightly, slamming the thin metal compartment into a piling.

He said the damage could be repaired with installation of another plenum section, which bolts on to the main frame of the hovercraft.

With Sober at the time of the crash were two training pilots from Buffalo, N.Y. One of them, Gavin Yaeger, 39, was treated for a wrenched shoulder at an Oakland hospital and released. The craft was on a training mission.

The year-long, \$1.2 million SFO experimental program for the craft ended last month. The Port of Oakland had approved SFO's plan to apply for additional federal funds to begin regular passenger service with a larger craft, and that application is pending.



Highly skilled personnel  
are always available at our fu-

Truman's.

## Farm Span

Continued from Page 1

"City of Oakland," crashed into the bridge with the left plennium—or air—compartment. Damage was not considered severe, and the craft remained afloat.

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# Port of Oakland Seeks New Hovercraft Money

FEB 27 1967

Nearly \$3.5 million in federal funds is being sought to renew for three years Oakland's one-year "demonstration project" of hovercraft transportation on San Francisco Bay.

The Port of Oakland has asked the Department of Housing and Urban Development for \$3,350,723 to assist in the program, using air-cushion vehicles (ACVs) with twice the 14-passenger capacity of the vehicles operated here in a test program from August 1965 to August 1966.

The federal grant will be supplemented by a "local contribution" totaling \$1,675,361, to come from Bell Aerosystems Co., U.S. builders of the British-designed ACVs, and from San Francisco - Oakland Helicopter Airlines. Estimated total cost of the three-year project is \$5,026,084. Some \$1,500,000 in passenger revenues is expected.

In the port's application for the new federal grant Ben E. Nutter, port executive director, said the larger SK-6 vehicles will offset the inherent disadvantages of the smaller SK-5s used in the initial project. The SK-6 can carry 30 passengers, and is 10 feet longer to stabilize it in foul weather, which frequently forced cancellation of runs by the smaller machines here.

Oakland has a unique test benefit for the ACVs in the

## Oakland Air Passenger Traffic Soars

Passenger traffic at Metropolitan Oakland International Airport was 17 per cent higher in January than in the same month a year ago.

The airport was used by 106,538 persons last month, up from 91,081 in January 1965. Using the airport in the 12-month period ended Jan. 31 were 1,225,186 persons, up 22.5 per cent from the preceding 12 months.

Beginning March 1 Western Airlines will extend its Flight 205, departing Oakland at 8:10 p.m., to Ontario via Los Angeles.

On March 7 United's Flight 133, now originating in Philadelphia, will begin starting from Boston, leaving at 6:20 p.m. and arriving in Oakland at 10:30 p.m.

natural barrier formed by the bay itself, Nutter said.

In the new three-year project, the SK-6 machines would be used initially in runs between San Francisco and Oakland airports, and to a new terminal in downtown San Francisco. In a second

phase the machines would offer inter-city transportation to Berkeley, Oakland, Sausalito and San Francisco, and in a third phase the SK-6s would be tried in commuter service, probably between San Francisco and Marin County.

It is expected that each of the two machines would operate 1,700 hours annually.

Ultimately, Nutter said, it is hoped the traffic here will allow use of 90-passenger SK-9 craft.

The previous program ended here Aug. 9, 1966. It was operated at the cost of \$1,187,726 with the U.S. Housing and Home Finance Administration putting up two-thirds of the cost and the remaining third shared equally by SFO Airlines, Bell Aerosystems and the Port of Oakland. The port's contribution was \$131,303, including an allocation of \$93,000 in City of Oakland funds.

The two SK-5s carried a total of 13,600 passengers in a year, reaching a high "load factor" of 40 per cent in June 1966.

It was the first commercial service in the U.S. for the air-cushion vehicles, which were designed by Westland Ltd. of Great Britain.

In the past year, a half dozen armed SK-5s have been used with some success by the U.S. Navy in the Delta war in South Vietnam.



MAR 3 - 1967

The City of Oakland and the Port of Oakland could be competing for multi-million-dollar grants from the same federal agency.

Due to the possibility, the City Council yesterday declined for the time being to endorse the Port of Oakland's seeking \$3½ million in federal urban mass transportation funds for Hovercraft operations on San Francisco Bay.

The city is seeking between \$8 to \$10 million from the same federal source to expand two prosaic downtown transit stations into terraced shopping centers.

City Manager Jerome Keithley yesterday warned councilmen that the port and the city could be seeking funds from the same federal "pocket."

He said the council may be "premature" in endorsing the

# Oakland Tribune



A RESPONSIBLE METROPOLITAN NEWSPAPER

Fri., March 3, 1967 21

Hovercraft project until he could make sure the two city agencies were not competing for the same money.

Keithley, who just returned from Washington where he sought the transit station funds, said he did not oppose the port's project but that the "total picture" should be first studied.

The council agreed and held up consideration of a request by Ben E. Nutter, the port's executive director, for its backing of the Hovercraft expansion proposal.

Keithley said that if it turns out that the city and the port are seeking the same federal funds, a priority list should be agreed upon.

He, Redevelopment Agency Director John Williams and B. R. Stokes, general manager of the Bay Area Rapid Transit District, met in Washington Wednesday with officials of the Department of Housing and Urban Development, which administers the mass transportation funds.

Keithley said results of the meeting were "inconclusive."

The port is seeking \$3,350,723 from the Federal Government to buy two new 30-passenger "air cushion vehicles" for a three-year test carrying passengers among communities on the Bay. Another \$1,675,361 would come from San Francisco - Oakland Helicopter Airlines, Inc., and Bell Aerosystems, which produces the wave-skimming vehicles.

The project would be an expansion of one completed by the port last Aug. 9. For a year, the agency sponsored the test operation of a 14-passenger Hovercraft on the Bay.

the Bay.

Referring to the earlier test project, Councilman Robert Osborne questioned whether a \$93,000 city contribution to the program was on a loan basis or an outright gift. He asked J. Kerwin Rooney, port attorney, whether the port planned to repay the city.

Rooney, backed up by City Auditor - Controller Alan Brizee, said the city contribution was for a i r p o r t promotion work. Brizee said he did not recall that the \$93,000 was loaned to the port.

The c o u n c i l asked City Clerk Gladys Murphy to check council meeting records on the transaction and report back.

A check of the records showed that the council transferred \$93,000 from its general fund to the Port Revenue Fund on March 18, 1965. There was no discussion on the transaction and no reason given for the transfer.

The Port of Oakland ran into still another roadblock at the meeting when councilmen held up action on a port request to slightly enlarge the port area. The property involves about one-third of an acre on the southwest corner of First and Clay Streets.

Rooney said that the city-owned p r o p e r t y has been leased inadvertently by the port to Howard Terminals for the past few years even though it technically is not under port jurisdiction.

He asked the council to transfer jurisdiction over to the port.

But Osborne said the port should pay the city any money it had received for the property's use.

The city attorney's office will study the matter and report what amount may be due from the port.



# Port May Cancel Fund Application

MAR 7 - 1967

The Port of Oakland is ready to withdraw its application for \$3.5 million in federal urban mass transportation funds if it in any way competes with the City of Oakland's request for \$8 to \$10 million.

Port commissioners yesterday asked for a report on whether there is any possibility the two applications are in competition.

And in the meantime, they ordered a letter "hand delivered" to individual city councilmen informing them of their willingness to withdraw the application.

Oakland seeks funds from the same federal source to expand two Broadway rapid transit subway stations into terraced shopping centers.

The port wants funds to renew its "demonstration project" of Hovercraft transportation on San Francisco Bay. It previously had a one-year Hovercraft project, but this has expired.

Councilmen refused to endorse the port's application last week after City Mgr. Jerome Keithley warned the port and the city could be seeking funds from the same federal "pocket."

Port Commissioner Peter M. Tripp said yesterday he seriously questioned the advisability of continuing the Hovercraft experiment at all.

He said it wasn't just the possible conflict over funds but the philosophy of making it easier for an airline traveler to fly out of San Francisco International Airport, instead of Oakland, that concerned him.

In other action yesterday the commission received five bids for construction of the first stage of the north side wharf at the Seventh Street Marine Terminal.

The apparent low bidder was Glanville Construction Co., with an offer of \$1,750,612. The high bid was \$2,059,610.

# Hovercraft Hops Hobbled By Lack of Federal Grant

MAR 17 1967

Oakland's hovercraft will remain on the beach, at least until midsummer.

There is no federal money available to renew the air-cushion vehicle service across the Bay.

There may be money in the new fiscal year budget, and the hovercraft program might get it.

If it does the program will not be in competition for federal funds with other projects in Oakland.

And so there is still hope for the Port of Oakland's plan to reinstate the hovercraft here on a larger scale, port officials were told yesterday by William Hurd of the federal Department of Housing and Urban Development.

The port on Feb. 2 asked HUD for \$3,350,723 to assist in a new hovercraft program here for three years.

This federal grant would be met by a "local contribution" of \$1,675,361 to come from Bell Aerosystems Co., builders of the British-designed machines, and from San Francisco-Oakland Helicopter Airlines

which would operate the vehicles. The port and the City of Oakland would not put up any money.

Hovercraft operated here from August 1965 to August 1966 in a test program sponsored by the Federal Government to determine if the machines had commercial passenger potential, but passenger loads were limited. The port feels this was because the machines could carry but 15 persons and were too small to operate in rough weather on the Bay. The port thought new 30-passenger hovercraft would offset these problems.

After the new application was made, city councilmen expressed apprehension about possible competition with the port's hovercraft funds and the City of Oakland's quest for from \$8 million to \$10 million from HUD to expand two downtown transit stations into shopping centers. The board of port commissioners agreed to withdraw their application if such competition arose.

There is no competition for funds, Hurd said yesterday.

But he told port officials

there is no money in the current fiscal year 1966-67 budget. There may be money in the fiscal 1967-68 budget which begins July 1, he said.

The port's application will be considered then.

The previous hovercraft program here, with two small machines, carried 13,600 passengers in transbay service in a year. That program was paid for with \$1,187,726 from the U.S. Housing and Home Finance Administration, which amounted to two thirds of the cost.

The remaining third of the cost was shared equally by Bell Aerosystems, SFO Airlines and the port. The port's share was \$131,303, including \$93,000 from the City of Oakland.



AUG 2 - 1967

**HOME FROM THE WAR**—Three 'hovercraft' air-cushion vehicles of the type formerly used in passenger service on San Francisco Bay have been brought to Oakland Airport for overhaul and modification after eight months of combat patrol for the U.S. Navy in Vietnam. Bell Aerosystems Co. has a \$1.2 million contract for the project, including the training of

Navy crews at Bell's main plant at Buffalo, N.Y., while San Francisco-Oakland Helicopter Airlines will do the mechanical work at its Oakland Airport base under a \$120,000 subcontract. A one-year commercial test on the Bay ended last August, but a renewed program is being sought for the air-cushion vehicles by the Port of Oakland.

## Hovercraft Test Sought

SEP 12 1976

Golden Gate Bridge directors have voted to apply for a nearly million-dollar federal grant to test two high-speed hovercraft on San Francisco Bay.

The 10-6 vote Friday was the minimum needed for passage. Several directors opposed the move, saying the

district should concentrate instead on getting its own \$38 million ferry system into operation.

"Sometimes I have trouble telling whether we're the Golden Gate Bridge or the Winchester Mystery House," said director John Molinari of San Francisco. "I have this

feeling that we think we've got to keep hammering on something all the time.

"We've got three ferries ... that have never carried a passenger, a ferry terminal in Larkspur that no passenger has ever walked through ... and we continue to diversify our efforts," said Molinari.

"I'm not convinced any of the programs we've got going are going to work."

## Hovercraft Request OK'd

SEP 23 1976

A grant application for 'hovercraft' for Marin-to-San Francisco commuters was approved by the Metropolitan Transportation Commission yesterday.

The application by the Golden Gate Bridge District is for \$985,000 in federal funds for a year-long demonstration project. It won narrow MTC approval in a 6-5 vote.

The shallow-draft 84-passenger ferries would be used for

nonpeak and evening service between San Francisco and Larkspur, and commute period service between San Francisco and San Rafael.

The vessels can travel at 35 knots, compared to 24 knots for the conventional ferries now in operation.

Contra Costa County representative Richard LaPointe suggested the experiment be extended to Antioch and Concord during the year, if possi-

ble.

John D. Crowley, representing the mayor of San Francisco, objected to the speed of the craft. "They might cream some dentist who's just bought a sailboat to use on his day off," he said.

Crowley was told the Coast Guard has already considered the safety question and given the demonstration project a green light.

San Mateo County repre-

sentative William Lawson said the amount needed for the project—nearly a million dollars—should be used to bail out existing transit systems. "I can't see us voting money for these far-out projects when the Muni, BART, and AC Transit are going broke," said Lawson.

MTC Chairwoman Louise Giersch said the Federal Government has already decided to spend the money on such an experiment, and the MTC has no choice except whether to approve an application for the funds. "They don't ask which operations are most needful," she said, a method Lawson called the Federal Government's "insidious approach."

Joseph Bort, MTC representative for Alameda County, said he thinks it is appropriate for the Federal Government to spend "a limited amount" on such experiments.

Boston and New York are also applying for the program. Only two of the three applicants will be funded.



# Son of Hovercraft for Bay

By JIM DOUTHITT

SEP 26 1976

Like speedy water striders on a country pond, swift hovercraft soon may be skipping across the waters of the Golden Gate, potential forerunners of the type of ferry craft that someday may replace some of the crush of commuting autos.

A decade ago the Port of Oakland pioneered use of hovercraft on the bay.

But the travelling public, despite the frustrations of crowded bridges and inadequate parking, failed to leap aboard the noisy hovercraft operated by SFO helicopter airline in testing scheduled service that provided swift, but sometimes terrifyingly jolting rides between a variety of shoreside terminal points.

Today, the Golden Gate Bridge Highway and Transportation District wants to try again, this time using the latest developments in hovercraft.

Sometimes called surface effect vehicles, hovercraft go faster than boats over the water because they ride atop a cushion of air, generated by powerful internal fan sys-

tem working within encircling sidewalls.

The latest craft, sought for testing by the bridge district across the Golden Gate, are already in practical service at Hong Kong, to the island Isle de Margarita off the Caribbean shore of Venezuela, on Lake Titicaca in the Bolivian Andes, on Long Island Sound in New York, in Manila Bay in the Philippine Islands, between Greenwich and key points in London, England, in Portugal and in Australia.

Similar hovercraft, but of different design, are in service at a variety of other places.

The specific watercraft sought by the bridge district is the Hovermarine HM2, manufactured by Hovermarine Corp. in Titusville, Fla.

The Mark IV version of that craft is an 84-passenger vehicle with a service speed of 35 knots, about 40 miles an hour. The vessel uses conventional diesel engines for both propulsion and for the lift fans. When riding on its air cushion, the HM2 requires a water depth of about three feet. Without the bubble, it will

float in as little as six feet of water.

The exciting little hovercraft that roared around the bay for the Port of Oakland tests 10 years ago were powered by gas turbines that actuated the lift fans and turned aircraft-style pusher propellers.

They were an adventure to ride, providing the noise of a jet plane and the comfort that could be expected atop a bucking bronco. But they were fast, with speeds to 50 miles an hour. They were also a bit difficult to steer with precision.

The present-day Hovermarine MK2 is said to be about as quiet as a bus. Its designers have succeeded in providing a comfortable ride.

Because the new craft is driven by propellers in the water below the after end of catamaran-like side-curtain hulls positive steering with close turning radii, has been achieved.

Unlike conventional ferries used by the bridge district, hovercraft are expected to be practical in shallower waters

and therefore able to dock closer to the homes of Marin County commuters. Possible embarkation points have been suggested at Larkspur, Loch Lomond harbor off Point San Pedro Road in San Rafael, downtown San Rafael, Paradise Cay harbor, Point San Pedro, Bel Marin Keys and even further north on the Sonoma shore at Port Sonoma, opposite Novato.

A variety of problems, such as location of parking, feeder bus service and terminal location, as well as commuter acceptability, are expected to be solved through a year-long test program, for which the district is currently seeking \$958,000 in federal funding for the over-the-water demonstration project.

"We might also find that they could be highly practical over-the-water links to such places as the Emeryville Peninsula, Jack London Square and perhaps the ocean approaches to several points of the Point Reyes National Seashore," said Stephan C. Leonoudakis of San Francisco, a director of the district.

The San Francisco attorney points out that a larger, 175- to 200-passenger Hovermarine HM5 is currently being developed in England and may be available for testing here toward the end of the 1977 test period.

Although Leonoudakis is hopeful that hovercraft may be quite practical for over-the-water commuter service to replace the automobile, he is more enthusiastic about the craft's potential for the transportation of visitors who come to this area by air or ship or train.

"And they seem to have fantastic potential for lower income people, who cannot afford the expense of maintaining a private auto for recreational transportation about the Bay Area."

# Bay Hovercraft Loses

*Transp*  
A proposed federally funded test of high speed hovercraft to carry commute traffic between Marin County and San Francisco over the waters of the Golden Gate has apparently lost out to a similar test of the craft in New York City.

The Urban Mass Transportation Administration announced the awarding of the test program to New York City the day after Democratic presidential candidate Jimmy Carter, in a campaign swing through the city, charged the Ford administration had done little to help the financially

plagued metropolis.

"I'm told New York got the project chiefly because the city is to contribute about \$1 million in matching funds," said Stephan C. Leonoudakis, a San Francisco director of the Golden Gate Bridge, Highway and Transportation District.

The San Francisco attorney has been a supporter of attempts to find practical alternative methods for crossing the Golden Gate.

The bridge district had proposed a \$958,000 demonstration project using surface ef-

fect vessels sometimes known as hovercraft that would carry 84 passengers at 35 to 40 miles-an-hour.

While the New York project has been selected for federal funding, that city's labor problems have not yet been resolved and may preclude operation of the test program, the bridge director pointed out.

"We were next in line in the competition between the Golden Gate, New York and Boston," Leonoudakis said.

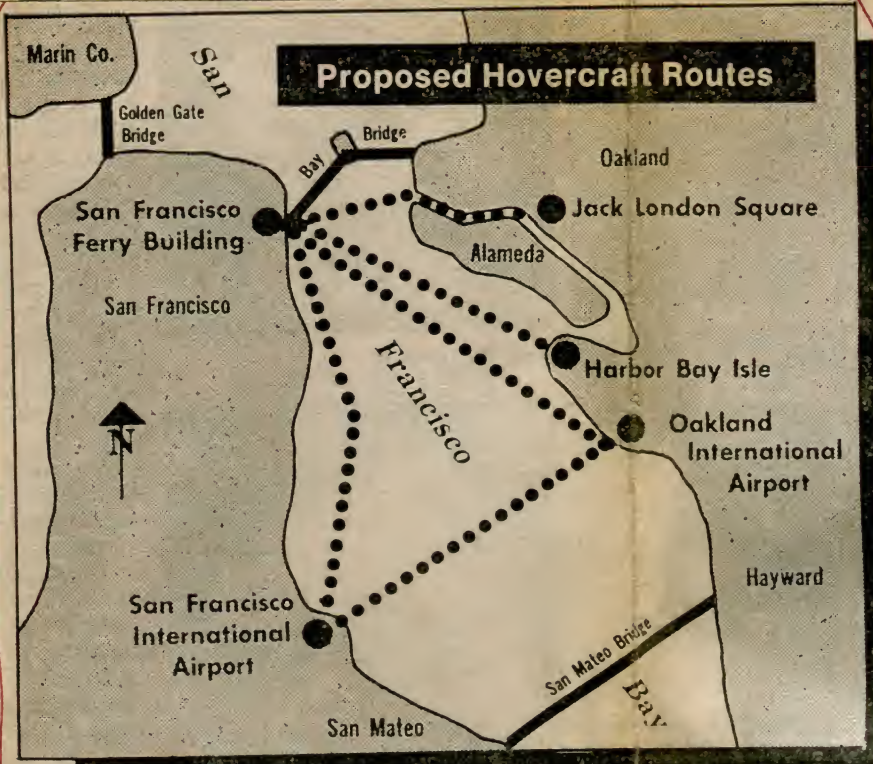
"I haven't given up hope

and intend to press for the hovercraft test after the election," he said, adding "Every effort will be made to test a larger model of the current vessel," expected to carry 250 passengers and be ready for service next year.

There has been Marin County criticism of the district move to test the unconventional hovercraft at this time, before completing the delayed \$38 million ferry service that is to use modern, but conventionally designed high speed ferries.

NOV - 1 1976





The Hovercraft would shuttle 100 people from Alameda to San Francisco.

# Developer planning Hovercraft project

By Will Jones FEB 23 1984  
The Tribune

Alameda developer Ronald H. Cowan yesterday unveiled plans to bring back the Hovercraft to carry commuters across the Bay in 10 minutes.

Cowan said if he can get the necessary approvals from various local, state and federal agencies, a 100-passenger, British-made Hovercraft will be shipped to the Bay Area for testing within three months.

The demonstration period, he said, could range from three months to a year or "for as long as it takes the various government agencies involved to obtain their required data."

The Hovercraft vessel is powered by two diesel engines, which operate fans that lift the vessel onto a cushion of air, contained in the vessels skirt. Two engines mounted on the rear of the cushion propel the vessel.

Tentative plans call for the air-cushioned Hovercraft to be tested for service between the Harbor Bay development in Alameda and the Ferry Building in San Francisco; the Ferry Building and San Francisco and Oakland airports, and direct routes between the two airports.

Cowan, board chairman of Har-

bor Bay Isle Associates and owner of Doric Development Inc. of Alameda, said the 77-foot-long Hovercraft, built by British Hovercraft Corp. Ltd. of East Cowes, Isle of Wight, is amphibious and can dock on a ramp.

He said they cost almost \$2 million each in Britain, but that he would have an American company build them for use here, which would add about \$500,000 to the cost.

He estimated that the fare would be \$4 or \$5 between Alameda and San Francisco and \$15 to \$20 from the Ferry Building to the airports.

Cowan made the announcement, at a San Francisco restaurant, before about 50 people, including numerous local officials from both sides of the Bay.

Walter Abernathy, executive director of the Port of Oakland, joined several other officials in praising the project.

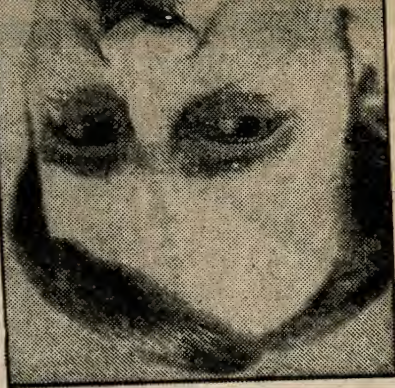
He jokingly told San Francisco Mayor Dianne Feinstein that with the Hovercraft operating on the Bay, it wouldn't be necessary to extend BART service to San Francisco airport.

Alameda Mayor Anne Diamant

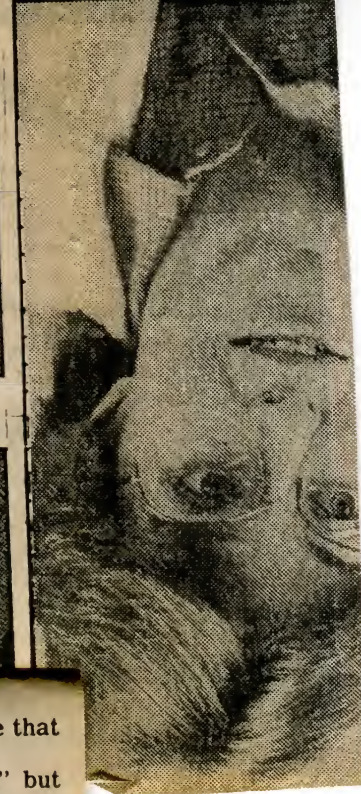
See HOVERCRAFT, Page B-2



patients with filthy kitchen and doctors and themselves than colleagues faked charts medical records of other hospital administrators and university bosses, Dr. Merrett health director audit. Silverman the government and is le its operation for the management. The audit of ineffectiveness of areas of medical staff and polarization bas



Guy Emanuele  
School superintendent



Continued from Page B-1

called the project a "very exciting adventure that we hope will be successful."

Feinstein said the concept is "exciting" but noted that the British company that builds the Hovercraft will have to prove that the vessel can operate safely in the choppy bay.

She also pointed out that no public money will be used for the project.

The normal top speed of the craft is 75 mph, but it would travel about 50 mph on the Bay.

Before Cowan can begin the project, he must first get approval from the City of Alameda for a building permit, the Bay Conservation and Development Commission for use of the shoreline, port and airport commissions of Oakland and San Francisco for landing operations, plus permits from the state Public Utilities Commission, the federal Treasury Department, the Fish and Wildlife Service and the Coast Guard.

Several Hovercraft have been tested in the Bay Area in the past 20 years but failed because of economics and other problems.

Abernathy noted that the port first experimented with the vessel in 1965, but scrapped the project after a training pilot lost control of the vessel in a sidespin and overturned it.

In the 1970s, the Golden Gate Bridge and Highway District also applied for federal funds to operate one, but dropped the idea after it was determined that it was not economically feasible.

But Cowan and Alistair Powell, a representative of the British manufacturer, said the AP1-88 vessel that will be used in the test is much more sophisticated than previous crafts.

Cowan said it is more maneuverable than other types of marine vessels, lighter, safer in high winds and swells. It can also be operated in zero visibility because it is equipped with radar.

The vessels have been in use for about 20 years and operate across the English Channel between Dover and Calais, the English mainland and the Isle of Wight, in the Middle East and North Africa.



# MTC to study plans for Hovercrafts

THU JUN 28 1984

## High-speed boats urged for commuters

By Mike Libbey  
The Tribune

A system of high-speed boats crisscrossing San Francisco Bay should be studied as an alternative to commuting on clogged highways, Quentin Kopp, chairman of the Metropolitan Transportation Commission, said yesterday.

"We need to find more ways for people to travel around the Bay Area without using cars," said Kopp.

Kopp, the San Francisco supervisor, noted that four water modes of commuting to San Francisco and other points have been proposed in the past four months by various groups — three from the Eastbay.

The proposals are based on the use of Hovercrafts, hydrofoils or jetfoils to skim above the water's surface at much faster speeds than conventional boats.

"It seemed to me now is the

time to bring these various entities together to form a comprehensive plan," Kopp said.

After a discussion about the study, commissioners decided to invite the four groups to make presentations at the next MTC meeting, July 25.

The groups and proposals include:

- A plan by Alameda developer Ronald Cowan to run Hovercrafts on routes connecting Alameda's Harbor Bay Isle, Oakland and San Francisco airports, Oakland's Jack London Square and San Francisco's Ferry Building.

Cowan said he hopes to begin testing \$2.5 million, 100-passenger Hovercrafts this year.

- A City of Pittsburg plan to run three Boeing jetfoils between Pittsburg and San Francisco, with some stops at Martinez and Oakland. The city council, at the urging of the chamber

of commerce, voted April 2 to begin studying the feasibility. The jetfoils cost \$15 million each and carry 316 passengers.

- An announcement by a Berkeley firm, Forum Hydrofoils, that it intends to start hydrofoil boat service on the bay next April. Several routes are being considered, including

Eastbay to the Ferry Building with connections from Marin County and Vallejo to San Francisco airport.

- A suggestion by Marin County Supervisor Robert Roumiguere for Hovercraft service between San Francisco and parts of northern Marin and Sonoma counties.

# Commuter-craft

THU OCT 18 1984 CC

## plan is moving

*MTC officials hope to eliminate obstacles blocking high-speed water transit plan*

By David Alcott  
The Tribune

The Metropolitan Transportation Commission voted at a meeting in Oakland yesterday to take the first step toward a future in which high-speed commuter craft on San Francisco Bay might relieve the freeway traffic crunch.

The commission's executive committee recommended that MTC's legislative committee work with CalTrans and the California Transportation Commission to remove legal obstacles that now bar any transbay commuter service that competes with toll bridges.

The executive committee also heard a staff review of five preliminary proposals to operate high-speed catamarans, hydrofoils or hovercraft from Pittsburg, Alameda, San Jose and Marin County to San Francisco.

One proposal, by Harbor Bay Isle Associates in Alameda, already is being tested on the Bay. HBI is testing a type of hovercraft called a surface-effect ship that moves across water on a cushion of air generated by propellers.

HBI's test vehicle carries 85

passengers, travels at 32 knots and costs \$1.2 million. It will be tested on runs between Alameda and the Ferry Building in San Francisco for three to six months before HBI makes a decision to purchase it.

HBI's initial proposal is for private transbay runs between the firm's business park and San Francisco beginning two years from now, but the company indicated that after that it may consider extending the service to the general public.

The other proposals exist only on the drawing boards, with no public demand or fares for the services determined.

Complicating the schemes are U.S. laws barring foreign-made ships from operating on American waterways. Only two of the five types of ships currently are manufactured in the United States.

The committee tentatively set Dec. 13 for its next meeting on the proposals, at which time it will consider a staff analysis of travel times, public demand and costs compared to existing transbay travel alternatives — cars, buses, trains and ferries.



# Hovercraft plan up for vote today

WED OCT 24 1984

*Real estate developer makes his pitch  
to Bay Area political leaders, reporters*

By David Alcott  
The Tribune

ALAMEDA — Looking like the king of flash, high-tech real estate developer Ronald H. Cowan yesterday introduced to the public a super-fast marine vessel that would connect his futuristic business park here with San Francisco.

Taking about 40 political leaders and reporters along for a ride and some indoctrination in the possibilities of waterborne transit, the controversial Cowan said his yet-to-be approved marine service may be "greased" for success by commuters fed up with freeway gridlock.

A key vote on his hopes comes this morning, when the San Francisco Port Authority is to consider giving Cowan landing rights for his 40-mph "surface-effect ship" that represents the latest advances in 20-year-old hovercraft technology.

The six-month testing period actually began about two weeks ago, and the port staff is recommending approval.

The Port of Oakland first experimented with a hovercraft in 1965 but scrapped the project after the vessel, which skimmed across the choppy bay on a cushion of air, went into a sidespin and overturned.

Several hovercraft have been tested in the Bay Area since then but the experiments failed because of economics and other reasons.

The new surface-effect ship (SES) is "an entirely different vessel" from those tested previously, Cowan said, because it has fiberglass skirts that extend underwater, trapping the cushion of air and also providing some stability.

The SES is billed as being able to operate during wintertime's five-foot waves and 35-knot winds, and Cowan said the six-

month test will challenge the vessel under those conditions.

Yesterday, the ride felt something like a jet taxiing down a runway, but sounded and smelled like a diesel-powered bus.

Since the early 1960s, British shipbuilders have developed and safely established hovercraft and related technology on five continents, including ferry services in Singapore, Hong Kong and on the English Channel and Solent Bay at the Isle of Wight.

In the United States, preference has been given to development of automobiles, freeways and bridges, and high-speed marine technology was shut out by the federal Jones Act, a law that bars foreign-made vessels from U.S. waterways.

Then came Cowan, who believes the Age of the Automobile has come to an end in the Bay Area now that gridlock and interminable delays on the Bay Bridge appear to be here to stay.

So the politically well-connected developer of Harbor Bay Isle went to Washington to lobby hard for a rarely granted waiver of the Jones Act to allow his six-month test of a modified British Vosper Hovermarine SES-218, a 45-passenger surface-effect vessel.

Yesterday's first public run of the SES attested to his success.

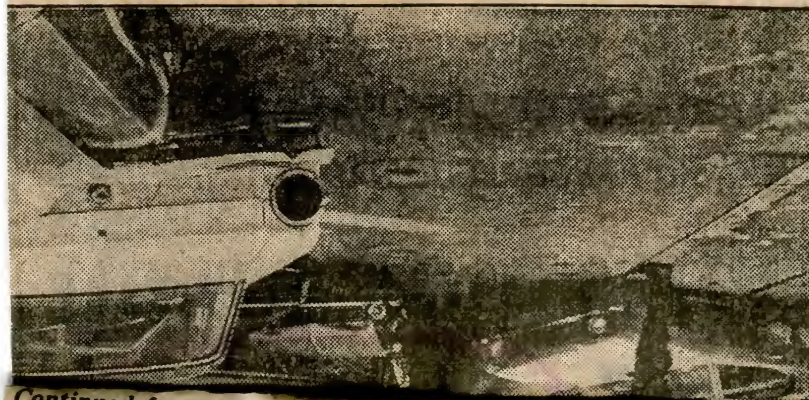
Oakland Mayor Lionel Wilson, Assembly Speaker Willie Brown and other political power-brokers were aboard as the vessel raced 7.5 nautical miles from San Francisco's Ferry Building to Alameda in 16 minutes.

San Francisco Mayor Dianne Feinstein was unable to make the trip yesterday. Earlier, she announced support of the project, but warned that the manufacturers would have to

See HOVERCRAFT, Page B-3



An Oakland police officer is dwarfed by one of eight of them belonging to employees of Gilro. The derailed hoppers swept up and mangled c afternoon on Glascock Street near the Oakland which left the tracks behind a Southern Pacific



*Continued from Page B-1*

He also held out the prospect of daily runs from Oakland Airport to San Francisco.

prove the vessel can operate safely on the choppy bay.

Yesterday's test run was safe but bumpy on calm waters, as the Hover Express streaked within 15 feet of several small fishing boats without disturbing them in its negligible wake.

Brown, a longtime ally of Cowan, declared the ride "incredible."

It was Cowan's close ties — and campaign contributions — to Brown that helped scuttle the developer's previous high-tech vision, a biotechnology research foundation that he sought to establish in 1981 through a \$500 million genetic research state bond issue.

That proposal failed when it was inserted in an minor building permit law at the last minute and Cowan's ties to Brown raised questions of possible conflict of interest.

Yesterday, however, Cowan showed that his high-tech vision for Harbor Bay Isle's Business Park was not a bit diminished by the fiasco three years ago.

When the hovercraft docked in Alameda, he took his passengers to see the nation's first operating "teleport" or "information airport" — a satellite dish and computer console that linked British officials in London, including a Member of Parliament, to Cowan and his experts in Alameda via a color television question-and-answer conference call.

The state-of-the-art, \$1,100-per-hour satellite call revealed a few bugs but worked well for 40 minutes.

Cowan said his high-tech tenants at the business park are "firmly interested" in his high-speed marine commuter service. If the six-month testing is successful enough to secure permanent permits, he said, the firms will pay to have employees speeded to work at Harbor Bay each morning from far-flung points like the Peninsula and San Francisco.



## Bay hovercraft plan glides to port commission approval

THU OCT 25 1984

The Tribune

SAN FRANCISCO — The San Francisco Port Commission voted unanimously yesterday to approve an agreement between Harbor Carriers and Harbor Bay Isle Associates for the use of ferry slip 201 to test and demonstrate hovercraft operations on San Francisco Bay.

Harbor Carriers, which leases the slip from the Port Commission, owns and operates the Red and White Fleet.

Harbor Isle is interested in testing the hovercraft for use as a high-speed ferry for trans-bay travel.

Before approving the agreement, the commission noted that there were no financial arrangements between Harbor Bay Isle Associates and Harbor Carriers.

The commission also noted that Harbor Bay Isle Associates would not be able to carry passengers on the ferry, as such action would be in violation of the federal Jones Act, which prohibits the use of foreign-built vessels in U.S. waters.

The hovercraft proposed for testing was built in the United Kingdom and a test run was made Tuesday.

## MTC will get report today on hovercraft

THU DEC 13 1984

The Tribune

The Metropolitan Transportation Commission is expected to receive a report today on proposals to operate super-fast ferries, also known as "jet boats" or hovercraft, on the bay to ease the commuter traffic on the Bay and Golden Gate bridges.

But MTC project manager Dennis Fay said only two of the five ferry proposals were given detailed analysis in the report.

The reason, he said, is that only two suggested the need for government subsidy of the jet-boat service.

Those proposals are by the Pittsburg Chamber of Commerce and Marin County Supervisor Robert Roumiguere.

The MTC analysis found that high-speed water transit would not reduce traffic congestion in Marin County or in Pittsburg, where it discovered that "most Pittsburg residents do not commute to San Francisco."

The other three proposals that would bring people to the city from San Jose-Alviso, Oakland-Alameda and Pittsburg-Martinez-Antioch, were suggested as private ventures and on that basis, the MTC staff declined to analyze them.

"The corridor connecting the City of Alameda to downtown San Francisco also has promise; however, legal issues would have to be clarified before regular ferry service could be instituted in this corridor," the report said.

Ironically, the Eastbay proposal by Harbor Bay Isle Associates is the only one of the five that actually has been testing a jet boat on the bay for several weeks.

"We deserve every bit as much equal coverage in the report as Marin's proposal whether or not we're public or private," said Stanley Koweleski, former Golden Gate Ferry Service manager who was hired by HBI to run its jet-boat service from the company's high-tech business park to San Francisco.

The hope of reducing traffic jams on Highway 101 in Marin County was the original impetus for Supervisor Roumiguere's proposal to the MTC.

# Bort defends MTC's appeal on hovercraft

By David Alcott  
The Tribune

The Metropolitan Transportation Commission's effort to remove legal barriers against high-speed ferry service on the Bay was stoutly defended yesterday by Alameda County Supervisor Joseph Bort.

The question was whether to seek legislative repeal of a 1930s-era law that prohibits ferry competition against the state-run toll bridges, such as the Bay Bridge, while bonds sold to build the bridges are being paid off.

Bort, a member of the commission, was supported by San Francisco Supervisor Quentin Kopp, who chaired yesterday's Executive Committee meeting at MTC headquarters in Oakland.

Kopp said the full commission might consider adopting the legislative repeal effort when it meets next week.

The U.S. Department of Transportation's representative on the commission, Robert Mayer, raised the question of whether it was worthwhile to seek the repeal.

He challenged the idea because a recent analysis by the Urban Mass Transit Administration concluded that the only economically feasible ferry routes on the Bay originate in Marin County.

He pointed out that no legal



#### Marin County.

He pointed out that no legal barriers prohibit a new high-speed hovercraft service from Marin to San Francisco.

Just such a proposal by Marin County Supervisor Robert Roumiguere was studied by the executive committee yesterday without a final recommendation, which is not expected until February.

Bort interjected, however, that the day may come when water transport from the Eastbay to San Francisco is needed and that the MTC "needs to clear the decks now" by seeking the repeal of "a lingering thing in the law."

"That legislation was put in (during the 1930s) when it was felt the ferry system might prevent full use of the bridge... it's become obvious that if anything, the bridge is overused today.

"If we can relieve some of the congestion on the bridge in the commute hours, we'd like to do that," Bort said.

None of the commissioners questioned the major finding in the MTC staff report on five different proposals for high-speed water transport on the Bay at various locations including Oakland and Alameda.

That finding, in a report that project manager Dennis Fay described as "very rough and cursory," said new ferry service for either Marin or Pittsburg would likely fail to relieve traffic congestion on the roads.

Supervisor Roumiguere rose from the audience, however, to assert "My opinion is that high-speed water transit is going to take a lot of people out of their automobiles."

# Hovercrafts may someday give SFO passengers a lift

WED JAN 13 1993

■ Airport commission plans \$13,000 feasibility study on possible traffic congestion relief

By Benny Evangelista  
STAFF WRITER

In the mid-1960s, the Port of Oakland helped operate and promote the nation's first passenger Hovercraft, which skimmed across the bay from Oakland International Airport.

However, the one-year test mainly demonstrated the crafts' ability to buffet passengers around and draw sparse crowds.

Today, rival San Francisco International Airport is spending \$13,000 on yet another study on whether to bring back a new generation of the water-born, air-cushioned vehicles to provide its customers with an easier, faster way to get to the airport than driving on traffic-clogged roads.

The new craft also could help bring more passengers to Oakland's airport. However, Port of Oakland officials are more cautious about Hovercrafts this time around because they realize Oakland could lose potential revenues from passengers who, given an easier way to cross the bay, opt to fly out of San Francisco instead of Oakland.

"It could mean that people from here could take a Hovercraft over to San Francisco and just park their cars here," said port spokesman Mel Wax.

Last week, the San Francisco Airport Commission approved hiring a consultant for a Hovercraft feasibility study. Two suggested routes would connect SFO with the Ferry Building and Oakland International, but other routes may be studied, said San Francisco airport spokesman Ron Wilson.

In addition, Textron Marine Systems of New Orleans, which has built 70 air-cushioned landing craft for the U.S. military, is offering to operate a demonstration service sometime this summer with a new 55-mph vessel that can carry 40 passengers, 11,000 pounds of cargo or a 7,000-pound combination of both.

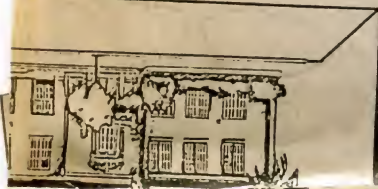
A Metropolitan Transportation Commission study completed last year said air-cushioned vessels connecting Oakland airport with downtown San Francisco or SFO could be successful if they carried a combination of freight and passengers.

An airport-to-airport route, about 11 miles terminal-to-terminal, would take about 20 minutes and travel at least 50 percent faster than conventional ground transportation, the study said. The trip from the Ferry Building also would take about 20 minutes.

The MTC report projects daily ridership for the airport-to-airport route would carry only 195 airline passengers and airport employees. On the other hand, it said 350 to 400 passengers per day might use a downtown San Francisco to Oakland

Please see **SFO**, page A-11





Continued from page A-7

International service. The study also noted a potential market in shuttling cargo for companies like UPS and Federal Express at Oakland Airport and aircraft parts between United Airlines facilities at both airports.

Regular ferry boats cannot serve Oakland International because the nearby waters are only one or two feet deep and would require dredging, said MTC senior planner Rod McMillan.

Hovercrafts, which fly above the water on a cushion of air, also could skim above the runways and dock right at the terminal. The crafts would go ashore either to the north or south of the main runway. In San Francisco, the crafts can still go ashore using the

and offers you a cappuccino, maybe a little tart or a croissant — whatever they have that day — and she hands you a menu."

dock built in the 1930s for the old Pan Am Flying Clipper planes.

From August 1965 to August 1966, the Port of Oakland and the old San Francisco-Oakland Helicopter Airlines operated the nation's first Hovercraft passenger service. The demonstration, which received a \$1.2 million federal grant, carried about 13,600 passengers between airports and to San Francisco's Pier 50B. The vessels, though, were only 37 percent full.

The port was unable to find new federal funds to continue the service and Hovercrafts disappeared for good.

In 1976, however, the Golden Gate Bridge district unsuccessfully applied for a federal grant for a new Hovercraft project and in

## ip goes to court M plant closing

Willow Run plant would last at least that long. The abate-ments were approved in 1984 and 1988. Prater was the first witness in a breach-of-contract lawsuit filed by the township in an effort to block GM from closing Willow Run this year. The automaker announced in February 1992 it would consolidate production of large rear-

1984, Alameda developer Ronald Cowan failed in his plans to start up a Hovercraft between his Harbor Bay development, the Ferry Building and the two airports.

Hovercraft technology has vastly improved since the 1960s, said James D. O'Bryan, Textron Marine's marketing director. For example, he said, the new craft can better handle the choppy waves at the Oakland airport shoreline that bedeviled the smaller craft of the past.

Textron Marine, a wholly owned subsidiary of Textron Inc., is a \$200 million a year company that still has a 40-craft U.S. military back order, but is looking for new post-Cold War civilian business.